					ST DEPARTMENT DIVISION O		URAL RES				AMENI	FC DED REPOI	RM 3	
		AF	PLICATION FO	R PERM	MIT TO DRILL					1. WELL NAME and N	JMBER NBU 921	-30H4BS		
2. TYPE C	F WORK	DRILL NEW WELL	REENTER	P&A WFI	I DEEPEN	I WELL	)			3. FIELD OR WILDCAT				
4. TYPE O	F WELL				ethane Well: NO		ž.			5. UNIT or COMMUNI		AGREEN	ENT NAM	1E
6. NAME	OF OPERATOR									7. OPERATOR PHONE				
8. ADDRE	SS OF OPERAT		KERR-MCGEE OIL	& GAS ON	NSHORE, L.P.					9. OPERATOR E-MAIL	720 92 L	9-6100		
10 MINES	RAL LEASE NUM	IRED	P.O. Box 173779		, CO, 80217 MINERAL OWNERS	SHIP				12. SURFACE OWNER		ınadarko.c	om	
	L, INDIAN, OR S					DIAN 🔵	STATE (	FEE	$\circ$	477	DIAN 🔲	STATE	F	EE 🔵
13. NAME	OF SURFACE	OWNER (if box 12	= 'fee')							14. SURFACE OWNER	R PHONE	(if box 12	= 'fee')	
15. ADDR	ESS OF SURFA	CE OWNER (if box	12 = 'fee')							16. SURFACE OWNER	R E-MAIL	(if box 12	! = 'fee')	
	N ALLOTTEE O	R TRIBE NAME			NTEND TO COMM		RODUCTION	FROM		19. SLANT				
(if box 12	2 = 'INDIAN')				central contract of the contra		ing Applicati	on) NO	$\circ$	VERTICAL DIF	RECTION	AL 📵 H	HORIZON	TAL 🔵
20. LOC	ATION OF WELL	-		FOOTAG	GES	QTF	R-QTR	SEC	TION	TOWNSHIP	R/	ANGE	МЕ	ERIDIAN
LOCATIO	ON AT SURFACE	1	194	8 FSL 71	16 FEL	N	IESE	3	0	9.0 S	2	1.0 E		S
Top of U	Ippermost Prod	lucing Zone	200	8 FNL 53	37 FEL	SI	ENE	3	10	9.0 S	2	1.0 E		S
At Total	Depth		200	8 FNL 53	37 FEL	SI	ENE	3	0	9.0 S	2	1.0 E		S
21. COUN	ITY	UINTAH		22. D	DISTANCE TO NEA	REST LEA 207		eet)		23. NUMBER OF ACRI	ES IN DRI 24		IT	
					DISTANCE TO NEA blied For Drilling		leted)	POOL		26. PROPOSED DEPTI		TVD: 112	43	
27. ELEV	ATION - GROUN	ID LEVEL		28. B	BOND NUMBER	7.0				29. SOURCE OF DRIL			DDI IOAD	
		4891				WYB00	00291			WATER RIGHTS APPR	43-8		PPLICAB	LE
					Hole, Casing									
String Surf	Hole Size	Casing Size 8.625	0 - 2820	Weight 28.0	t Grade & T		Max Mu			Cement Type V		Sacks 180	Yield 1.15	Weight 15.8
Suii	11	0.023	0 - 2020	20.0	J-33 L1	iac	0.	. 2		Class G		270	1.15	15.8
Prod	7.875	4.5	0 - 11459	11.6	HCP-110	LT&C	12	.5	Prei	mium Lite High Stre	ngth	350	3.38	12.0
										50/50 Poz		1660	1.31	14.3
					А	TTACH	MENTS							
	VEF	RIFY THE FOLLO	WING ARE AT	ACHED	IN ACCORDAN	ICE WITI	H THE UTA	AH OIL A	ND GAS	CONSERVATION G	ENERA	L RULES		
<b>№</b> w	ELL PLAT OR M	AP PREPARED BY	LICENSED SURVE	YOR OR E	ENGINEER		СОМ	PLETE DR	RILLING PI	LAN				
AF	FIDAVIT OF STA	ATUS OF SURFACE	OWNER AGREEN	IENT (IF F	FEE SURFACE)		FORM	1 5. IF OPE	ERATOR IS	S OTHER THAN THE LE	EASE OW	NER		
<b>I</b> ✓ DII	RECTIONAL SU	RVEY PLAN (IF DIR	ECTIONALLY OR	HORIZON	NTALLY DRILLED	))	торо	GRAPHIC	AL MAP					
NAME Jo	oel Malefyt			TITL	<b>E</b> Regualtory Anal	lyst			PHONE	720 929-6828				
SIGNATU	JRE			DATI	E 11/24/2014				EMAIL j	oel.malefyt@anadarko.	com			
	BER ASSIGNED 047550250			APPF	ROVAL				B	00. gjill				
									Pern	nit Manager				

NBU 921-30I PAD Drilling Program
1 of 6

# Kerr-McGee Oil & Gas Onshore. L.P.

#### NBU 921-30H4BS

Surface: 1948 FSL / 716 FEL NESE BHL: 2008 FNL / 537 FEL SENE

Section 30 T9S R21E

Unitah County, Utah Mineral Lease: USA UTU 000581

#### **ONSHORE ORDER NO. 1**

#### **DRILLING PROGRAM**

# 1. & 2.a <u>Estimated Tops of Important Geologic Markers</u>: <u>Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations</u>:

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 - Surface	
Green River	1,596'	
Birds Nest	1,878'	Water
Mahogany	2,368'	Water
Wasatch	4,928'	Gas
Mesaverde	7,982'	Gas
Sego	10,232'	Gas
Castlegate	10,279'	Gas
Blackhawk	10,643'	Gas
TVD =	11,243'	
TD =	11,459'	

2.b Kerr McGee Oil & Gas Onshore LP (Kerr McGee) may elect to drill to (i) the Blackhawk formation (part of the Mesaverde Group), (ii) to a shallower depth within the Mesaverde Group, or (iii) to the Wasatch Formation. If Kerr McGee drills to the Blackhawk formation, please refer to Blackhawk as the bottom formation. The attached Blackhawk Drilling Program includes Total Vertical Depth, Total Depth, and appropriate casing and cement programs for the deeper formation.

If Kerr-McGee drills to a shallower depth in the Mesaverde Group or to the Wasatch Formation, please refer to the attached Wasatch/Mesaverde Drilling Program which includes Total Vertical Depth, Total Depth, and appropriate casing and cement programs for the shallower formations.

#### 3. Pressure Control Equipment

Please refer to the Standard Operating Practices on file with the BLM Vernal Field Office.

NBU 921-30I PAD Drilling Program 2 of 6

# 4. Proposed Casing & Cementing Program:

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

## 5. <u>Drilling Fluids Program:</u>

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

#### 6. <u>Evaluation Program:</u>

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

#### 7. <u>Abnormal Conditions</u>:

#### 7.a Blackhawk (Part of Mesaverde Group)

Maximum anticipated bottom hole pressure calculated at 11243' TVD, approximately equals 7,196 psi (0.64 psi/ft = actual bottomhole gradient)

Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

Maximum anticipated surface pressure equals approximately 4,706 psi (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

Per Onshore Order No. 2 - Max Anticipated Surf. Press.(MASP) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point))

# 7.b Wasach Formation/Mesaverde Group

Maximum anticipated bottom hole pressure calculated at 10232' TVD, approximately equals 6,242 psi (0.61 psi/ft = actual bottomhole gradient)

Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

Maximum anticipated surface pressure equals approximately 4,017 psi (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

Per Onshore Order No. 2 - Max Anticipated Surf. Press.(MASP) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point))

#### 8. <u>Anticipated Starting Dates:</u>

Drilling is planned to commence immediately upon approval of this application.

## 9. <u>Variances:</u>

Please refer to the Standard Operating Practices on file with the BLM Vernal Field Office.

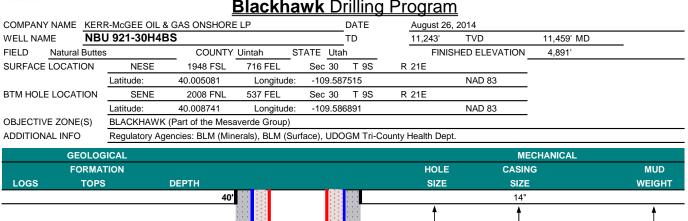
#### 10. Other Information:

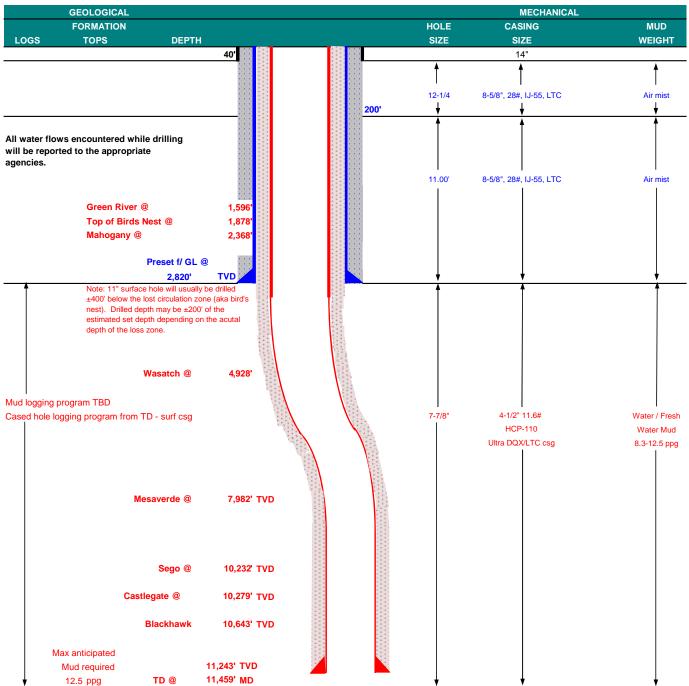
Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

NBU 921-30I PAD Drilling Program
3 of 6



# KERR-McGEE OIL & GAS ONSHORE LP Blackhawk Drilling Program





NBU 921-30I PAD

Drilling Program

4 of 6



# KERR-McGEE OIL & GAS ONSHORE LP Blackhawk Drilling Program

CASING PROGRAM

CONDUCTOR

SURFACE PRODUCTION

<u></u>										
									LTC	DQX
SIZE	INT	ERVA	L	WT.	GR.	CPLG.	BURST	COLLAPSE	TE	NSION
14"	(	0-40'								
							3,390	1,880	348,000	N/A
8-5/8"	0	to	2,820	28.00	IJ-55	LTC	1.91	1.42	5.03	N/A
							10,690	8,650	279,000	367,174
4-1/2"	0	to	5,000	11.60	HCP-110	DQX	1.19	1.18		3.41
4-1/2"	5,000	to	11,459'	11.60	HCP-110	LTC	1.19	1.18	4.60	

Surface Casing:

(Burst Assumptions: TD = 12.5 ppg) 0.73 psi/ft = frac gradient @ surface shoe

Fracture at surface shoe with 0.1 psi/ft gas gradient above

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

Production casing:

(Burst Assumptions: Pressure test with 8.4ppg @ 9000 psi) 0.64 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

#### **CEMENT PROGRAM**

	FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE LEAD	500'	Premium cmt + 2% CaCl	180	60%	15.80	1.15
Option 1		+ 0.25 pps flocele				
TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80	1.15
		+ 2% CaCl + 0.25 pps flocele				
SURFACE		NOTE: If well will circulate water to	surface, opt	on 2 will be	utilized	
Option 2 LEAD	2,320'	Premium cmt + 16% Gel + 10 pps gilsonite	280	35%	12.00	2.86
		+ 0.25 pps Flocele + 3% salt BWOC + GR 3 pps				
TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80	1.15
		+ 0.25 pps flocele				
TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION LEAD	4,419'	Premium Lite II +0.25 pps celloflake + .4% FL-52	350	35%	12.00	3.38
		+ .3% R-3 + .5 lbs/sk Kol-Seal + 6%Bentonite II +				
		1.2% Sodium Metasilicate + .05 lbs/sk Static Free				
TAIL	7,040'	50/50 Poz/G + 10% salt + .05 lbs/sk Static Free	1,660	35%	14.30	1.31
		+ 1.2% Sodium Metasilicate + .5 % EC-1				
		+.002 gps FP-6L + 2% Bentonite II				

<sup>\*</sup>Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

# FLOAT EQUIPMENT & CENTRALIZERS

**SURFACE** 

Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe

**PRODUCTION** 

Float shoe, 1 jt, float collar. 15 centralizers for a Mesaverde and 20 for a Blackhawk well.

# ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11\* 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Surveys will be taken at 1,000' minimum intervals.

Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

IF extreme mud losses are observed OR cement doesn't reach surface on a well on the pad, a DV Tool may be used. With Cement Baskets above and Below it.

DRILLING ENGINEER:		DATE:	
	Matt Stiasny/Paul Wages		
DRILLING SUPERINTENDENT:		DATE:	
	Lovel Young		

<sup>\*</sup>Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

NBU 921-30I PAD **Drilling Program** 5 of 6



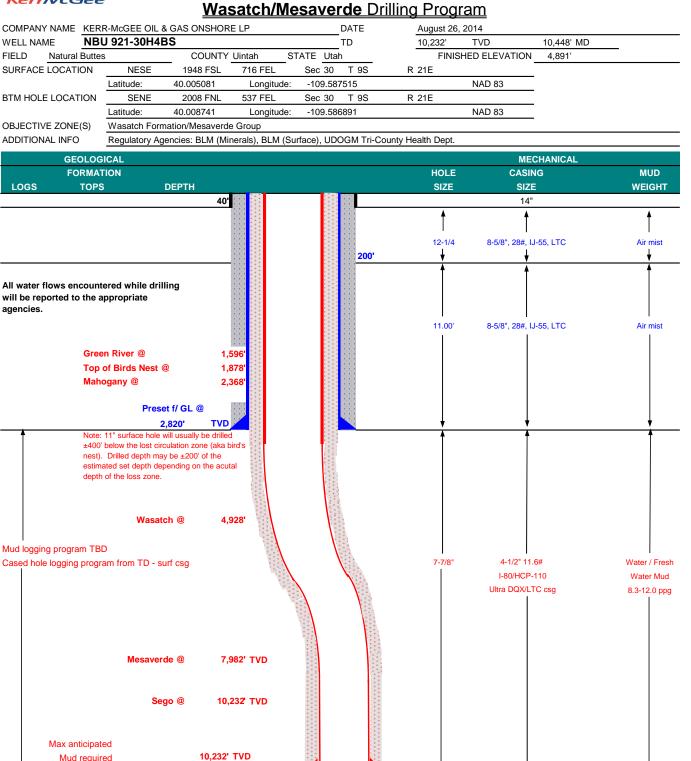
Mud required

12.0 ppg

10,448' MD

TD@

# KERR-McGEE OIL & GAS ONSHORE LP



NBU 921-30I PAD Drilling Program
6 of 6



# KERR-McGEE OIL & GAS ONSHORE LP Wasatch/Mesaverde Drilling Program

CASING PROGRAM	<u>N</u>								DESIGN I	FACTORS	
										LTC	DQX
	SIZE	INT	ERVA	$\Gamma$	WT.	GR.	CPLG.	BURST	COLLAPSE	TE	NSION
CONDUCTOR	14"	0	-40'								
								3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0	to	2,820	28.00	IJ-55	LTC	1.91	1.42	5.03	N/A
								7,780	6,350		267,035
PRODUCTION	4-1/2"	0	to	5,000	11.60	I-80	DQX	1.11	0.99		2.70
								10,690	8,650	223,000	
	4-1/2"	5,000	to	10,448'	11.60	HCP-110	LTC	1.53	1.35	4.32	

**Surface Casing:** 

(Burst Assumptions: TD = 12.0 ppg) 0.73 psi/ft = frac gradient @ surface shoe

Fracture at surface shoe with 0.1 psi/ft gas gradient above

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

Production casing:

(Burst Assumptions: Pressure test with 8.4ppg @ 7000 psi) 0.61 psi/ft = bottomhole gradient (Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

#### **CEMENT PROGRAM**

	FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE LEAD	500'	Premium cmt + 2% CaCl	180	60%	15.80	1.15
Option 1		+ 0.25 pps flocele				
TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80	1.15
		+ 2% CaCl + 0.25 pps flocele				
SURFACE		NOTE: If well will circulate water to s	urface, option	n 2 will be ut	ilized	
Option 2 LEAD	2,320'	Premium cmt + 16% Gel + 10 pps gilsonite	280	35%	12.00	2.86
		+ 0.25 pps Flocele + 3% salt BWOC + GR 3 pps				
TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80	1.15
		+ 0.25 pps Flocele + 3% salt BWOC + GR 3 pps				
TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION LEAD	4,428'	Premium Lite II +0.25 pps celloflake + .4% FL-52	350	35%	12.00	3.38
		+ .3% R-3 + .5 lbs/sk Kol-Seal + 6%Bentonite II +				
		1.2% Sodium Metasilicate + .05 lbs/sk Static Free				
TAIL	6,020'	50/50 Poz/G + 10% salt + .05 lbs/sk Static Free	1,420	35%	14.30	1.31
		+ 1.2% Sodium Metasilicate + .5 % EC-1				
		+.002 gps FP-6L + 2% Bentonite II				

<sup>\*</sup>Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

#### **FLOAT EQUIPMENT & CENTRALIZERS**

SURFACE Guide shoe, 1 jt, ir

Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe

PRODUCTION

Float shoe, 1 jt, float collar. 15 centralizers for a Mesaverde and 20 for a Blackhawk well.

centralizer on the first 3 joints and one every third joint thereafter.

## ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

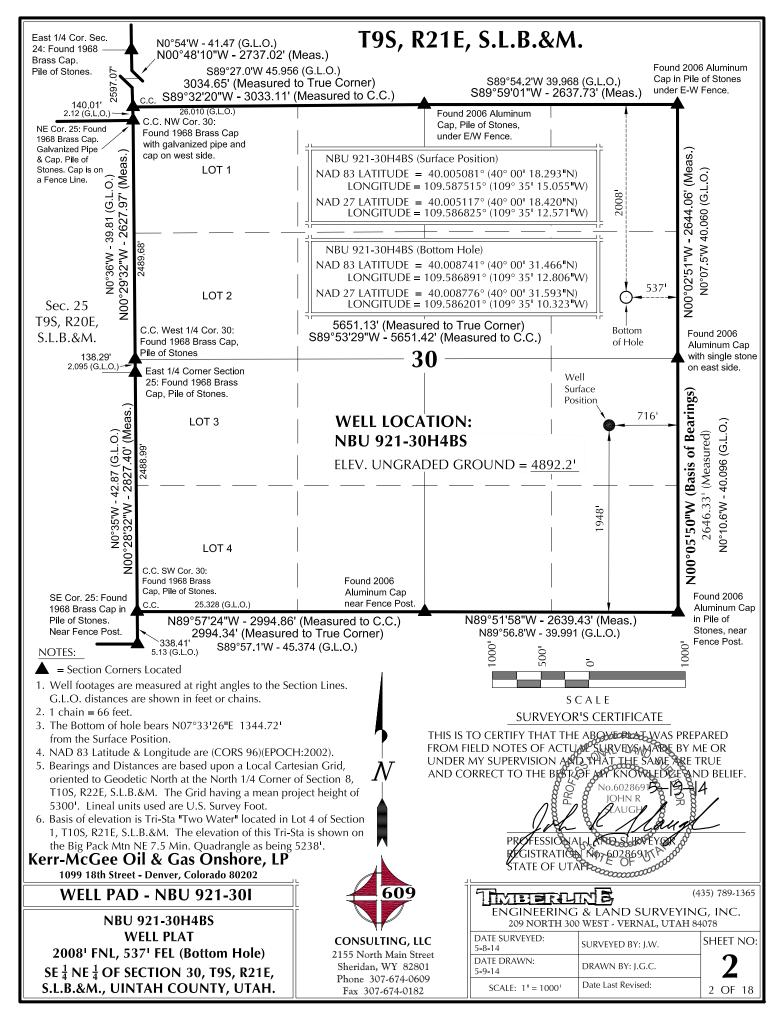
Surveys will be taken at 1,000' minimum intervals.

Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

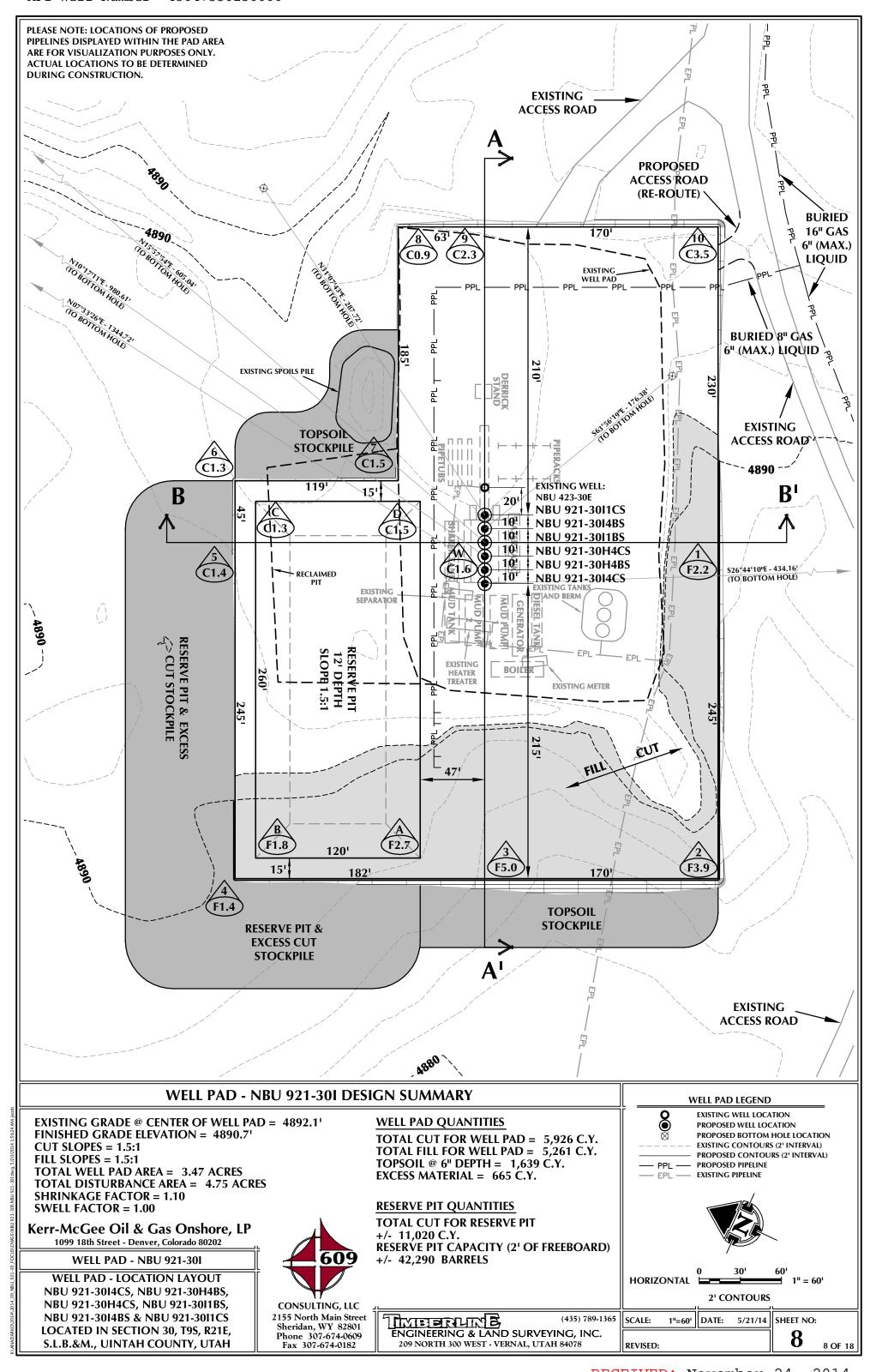
IF extreme mud losses are observed OR cement doesn't reach surface on a well on the pad, a DV Tool may be used. With Cement Baskets above and Below it.

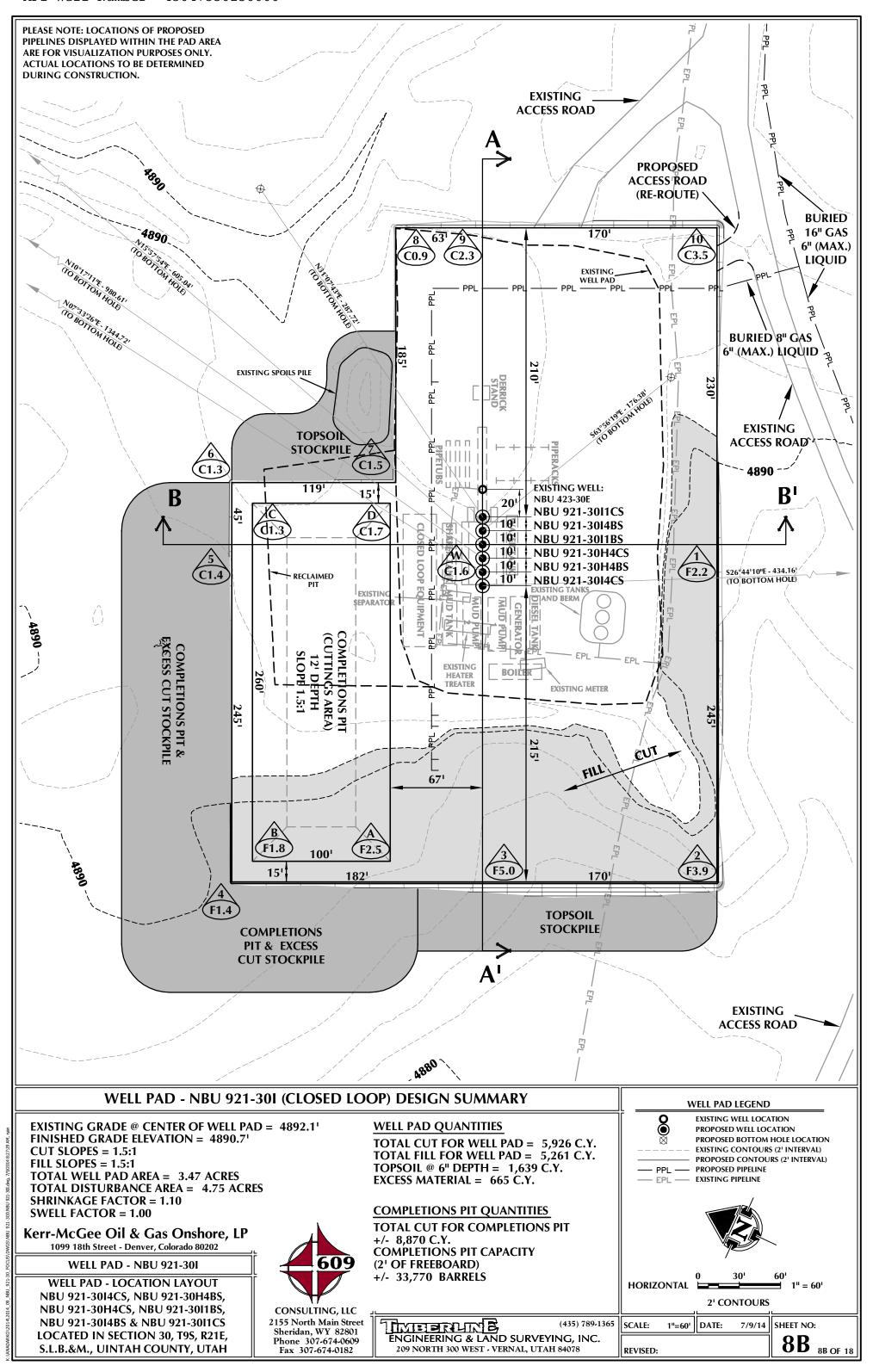
DRILLING ENGINEER:		DATE:	
	Matt Stiasny/Paul Wages	-	
DRILLING SUPERINTENDENT:		DATE:	
	Lovel Young	·	

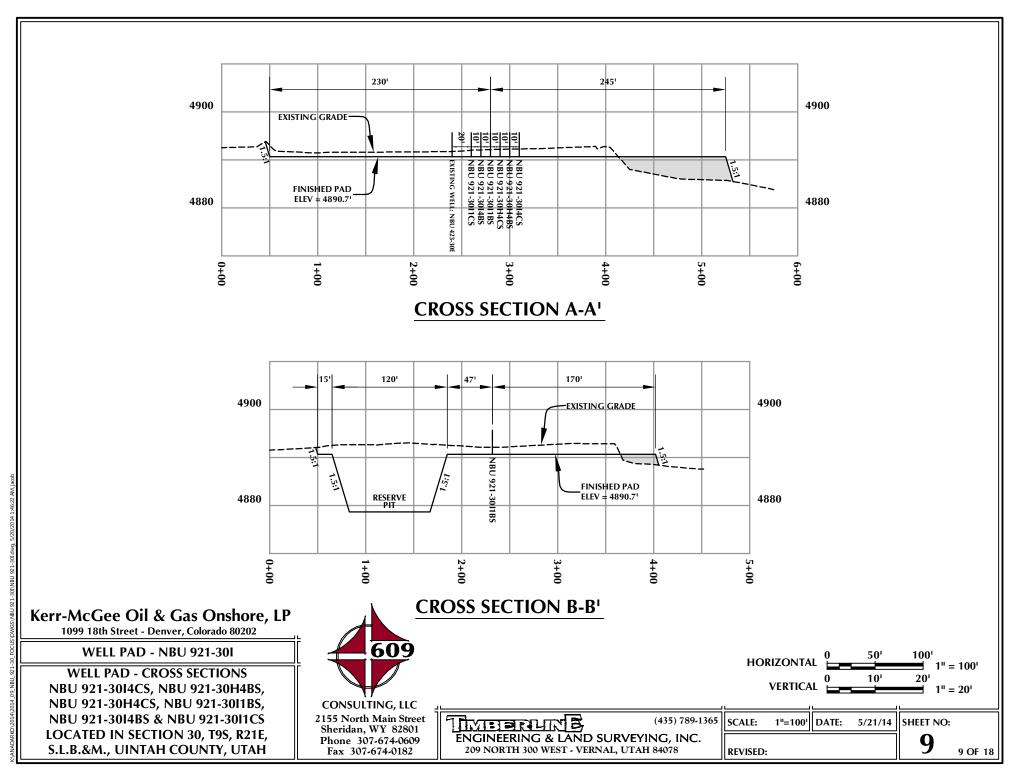
<sup>\*</sup>Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

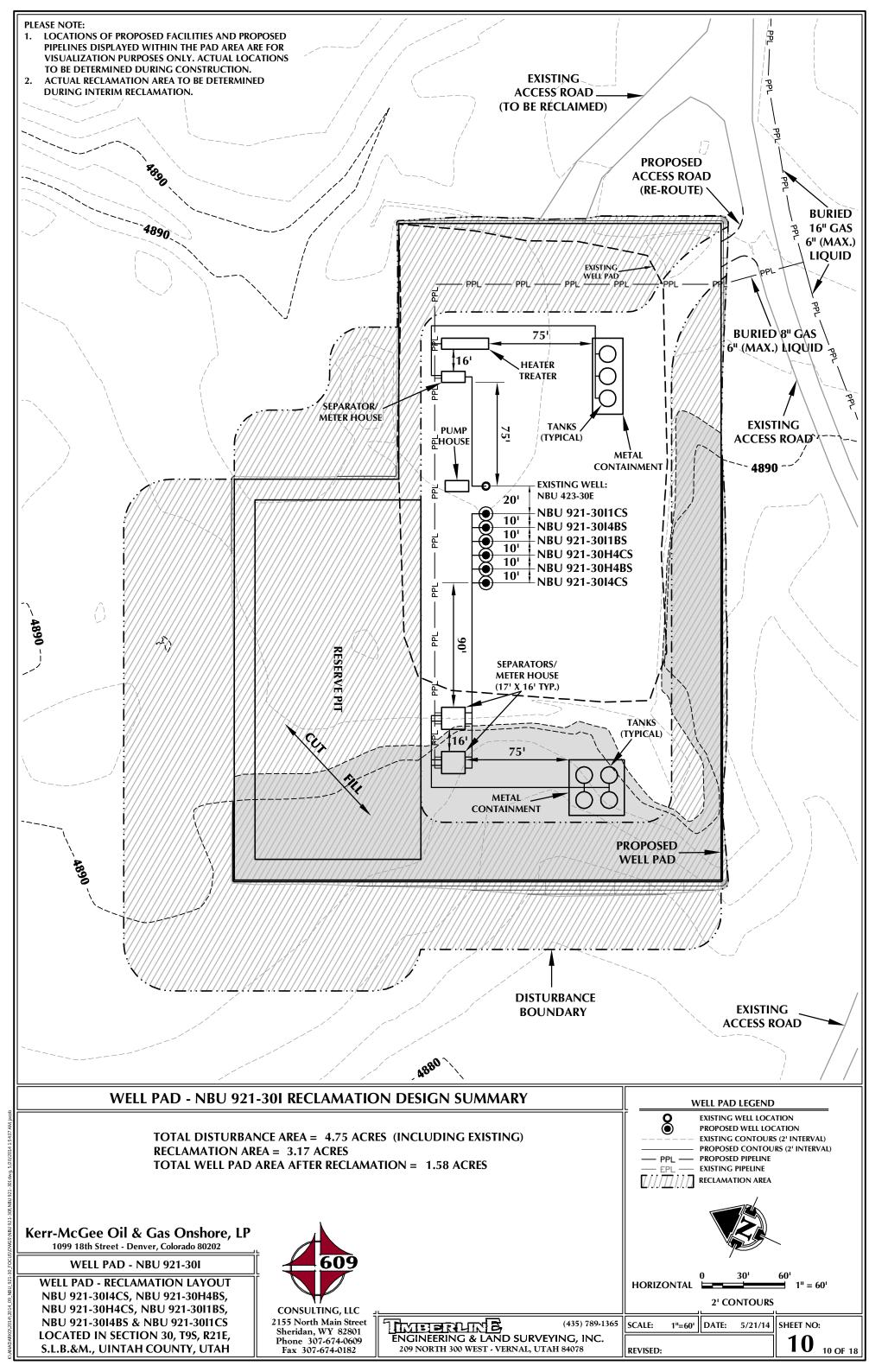


			SURFACE POS	SITION					В	OTTOM HOLE		
WELL NAME  NBU 921-3014CS  NBU 921-3014PS	N/ LATITUDE	AD83	IDE LATITU	NAD27	TITLIDE	FOOTAGE	LATI	NAD		NAI	D27 LONGITUDE	FOOTAGES
NBU	40°00'18.252"	LONGITU N 109°35'15.1		78"N 109°35"	ITUDE 12.688"W	1943 FSL			LONGITUDE 109°35'12.655"W	40°00'14.550"N	109°35'10.172"W	
	40.005070°N 40°00'18.293"	109.587548°				725' FEL	40.0040		109.586849°W	40.004042°N	109.586159°W	530' FEL
921-30H4BS	40-00-18.293* 40.005081°N	N 109°35'15.0. 109.587515°		20"N 109°35' °N 109.586		1948' FSL 716' FEL	40.0087		109°35'12.806"W 109.586891°W	40.008776°N	109°35'10.323"W 109.586201°W	2008' FNL 537' FEL
NBU 921-30H4CS	40°00'18.335" 40.005093°N	N 109°35'14.9 109.587483°		62"N 109°35" °N 109.586		1952' FSL	40°00'2 40.0077		109°35'12.706"W 109.586863°W	40°00'27.997"N 40.007777°N	109°35'10.223"W 109.586173°W	
NBU	40°00'18.376"		22"W 40°00'18.5	03"N 109°35"		707' FEL 1956' FSL	40°00¹2	4.126"N	109.366663 VV 109°35'12.694"W	40°00'24.252"N	109°35'10.211"W	530' FEL 2538' FSL
921-30I1BS NBU	40.005104°N 40°00'18.418"	109.587451° N 109°35'14.70		°N 109.586 44"N 109°35"		697' FEL	40.0067		109.586860°W 109°35'12.668"W	40.006737°N	109.586170°W 109°35'10.185"W	530' FEL
921-30I4BS	40.005116°N	109.5874189	W 40.005151	°N 109.586	728°W	1960' FSL 688' FEL	40.0049	904°N	109.586852°W	40.004939°N	109.586162°W	530' FEL
NBU 921-30I1CS	40°00'18.459" 40.005128°N	N 109°35'14.56 109.587386°		86"N 109°35' °N 109.586		1964' FSL 679' FEL	40°00'2 40.0058		109°35'12.681 <b>"</b> W 109.586856°W	40°00'21.022"N 40.005839°N	109°35'10.198"W 109.586166°W	2211' FSL 530' FEL
NBU 423-30E	40°00'18.542"	N 109°35'14.3	56"W 40°00'18.6	69"N 109°35"	11.872"W	1973' FSL			1031500050 11		1031300100 11	330 TEL
	40.005151°N	109.5873219				661' FEL	na Danisia.	- 40 Do44	ous I Iolo			
WELL NAME	NORTH	EAST	WELL NAME	IVE COORD NORTH	EAS		L NAME	NOR		WELL NAM	1E NORTH	EAST
NBU	-387.7'	195.3'	NBU	1333.0'	176.	o NBU		964.		NBU	581.7'	166.4
921-30I4CS WELL NAME	NORTH	EAST	921-30H4BS WELL NAME	NORTH	EAS	921-3	0H4CS	3011		921-30I1BS	5   551	10011
NBU	-77.5 <sup>1</sup>	158.4	NBU	246.3	148.		1	1			1	
,09	30,	10	N1	Az=7.! 07°33'26' (To Botto Az=10.2' 0°17'11"E Fo Bottom	'E - 13 om Ho 8639° E - 980	44.72' — le) \			$\begin{array}{c c} & VIS^{\circ}S7^{\circ}S4^{\circ}E \\ & (To\ Bottom\ Hole) \\ & Az=15.96500^{\circ} \end{array}$	100 10 10 10 10 10 10 10 10 10 10 10 10	55°14'29"E 7=65.241'39°	
	THE S S.L.B. GLOB	E $\frac{1}{4}$ OF SECT &M. WHICH BAL POSITIC	IGS IS THE EA FION 30, T9S, H IS TAKEN FR DNING SATELI TO BEAR NOO	R21E, OM .ITE °05'50"W.	Γο Bot	53.26389 tom Hole 0"E - 434.	<u>.</u> ) ———	S 1	66/ 7. 10 Exist. N.H.=65,20972° A. 10 Exist. N.H.=65,2336 7. 10 Exist. N.H.=65,2336 7. 10 Exist. N.H.=65,2336 8. 10 Exist. N.H.=65,2336	Az=116.0613 6'19"E-176	38, E	Bottom of Hole
WELL WELLS - N	8th Street - D LL PAD - PAD INT	NBU 92 ERFEREN 14CS, NBU	21-30I CE PLAT 921-30H4BS		CONSI	609 ULTING, LI	<b>∕</b> LC	E	ENGINEERIN 209 NORTH	UNE NG & LAND	SURVEYINO RNAL, UTAH 84	
NBU S	921-30I4BS	& NBU 92	1-30I1CS			orth Main Str		DATE	DRAWN:	DRAWN BY:		7
LOCA	TED IN SEC	TION 30, T	19S, R21E,			n, WY 8286 307-674-06		5-9-1			•	/
S.L.B.8	&M., UINTA	H COUNT	Y, UTAH.			07-674-018		S	CALE: 1" = 60'	Date Last Re	visea:	7 OF 18









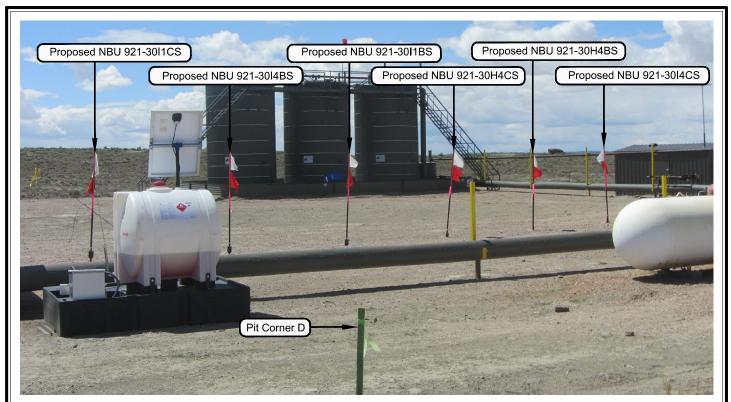


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE

**CAMERA ANGLE: SOUTHERLY** 



PHOTO VIEW: FROM EXISTING ACCESS ROAD

**CAMERA ANGLE: NORTHWESTERLY** 

# Kerr-McGee Oil & Gas Onshore, LP

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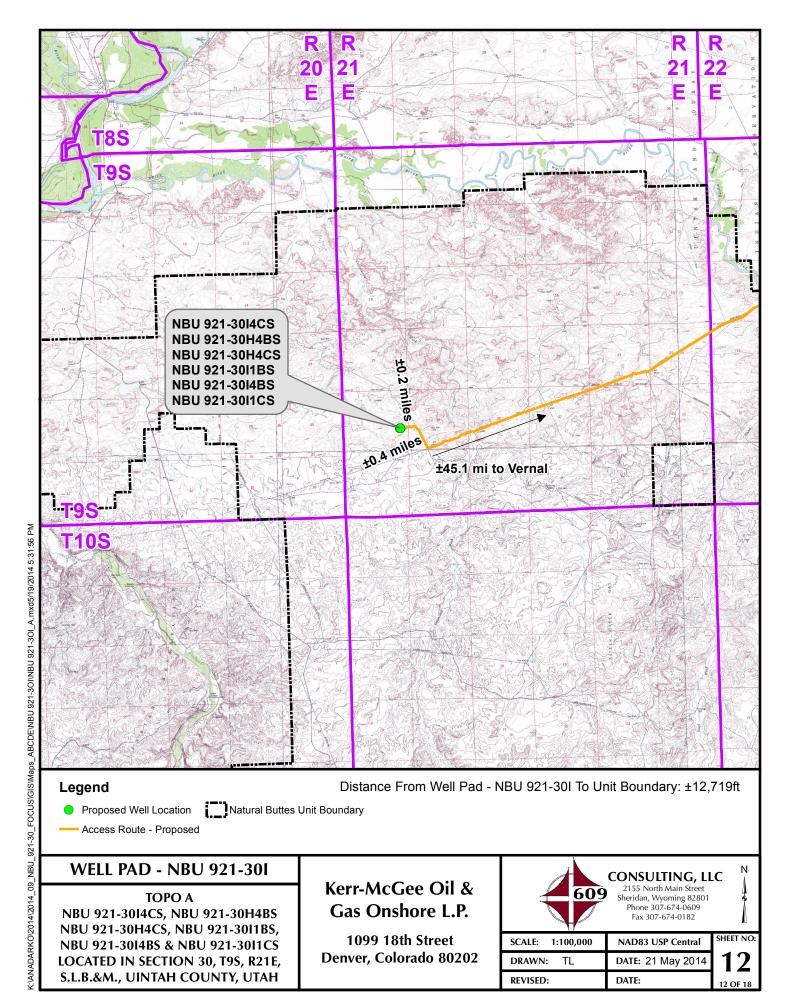
# **WELL PAD - NBU 921-301**

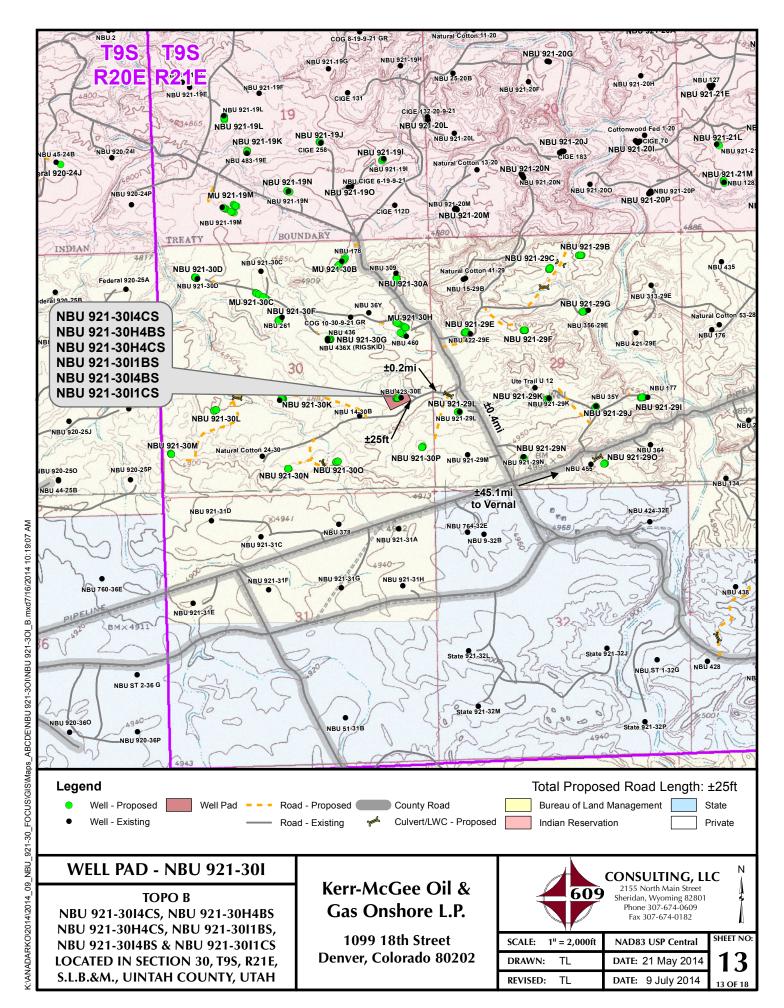
LOCATION PHOTOS
NBU 921-3014CS, NBU 921-30H4BS,
NBU 921-30H4CS, NBU 921-3011BS,
NBU 921-3014BS & NBU 921-3011CS
LOCATED IN SECTION 30, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH.

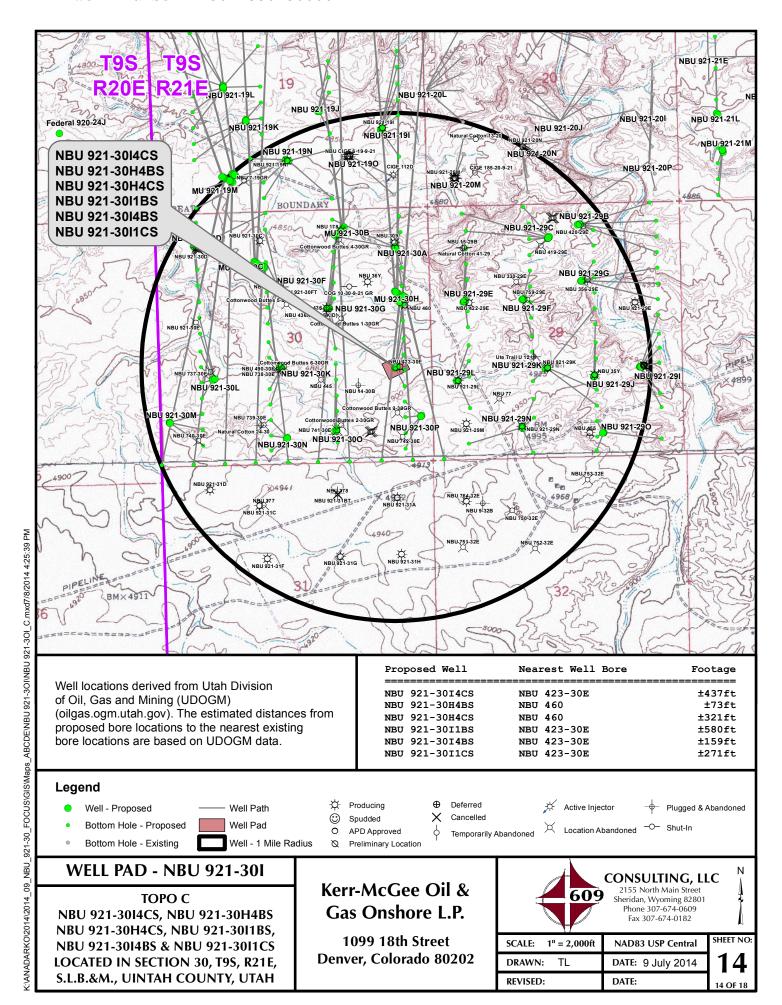


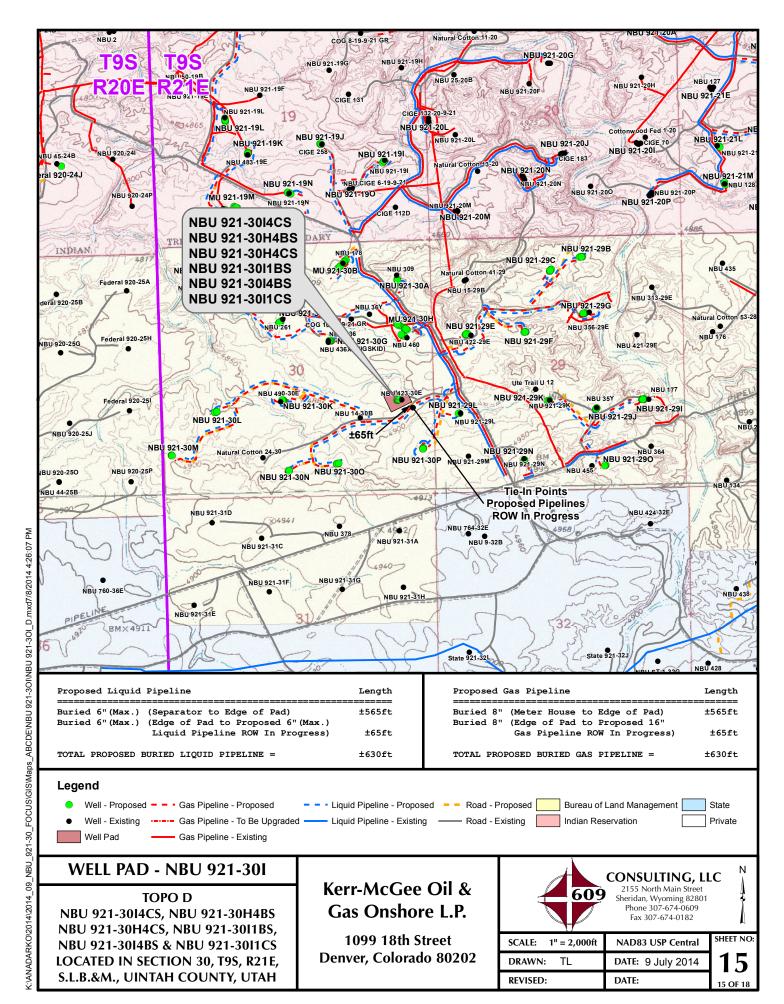
## CONSULTING, LLC 2155 North Main Street Sheridan, WY 82801 Phone 307-674-0609 Fax 307-674-0182

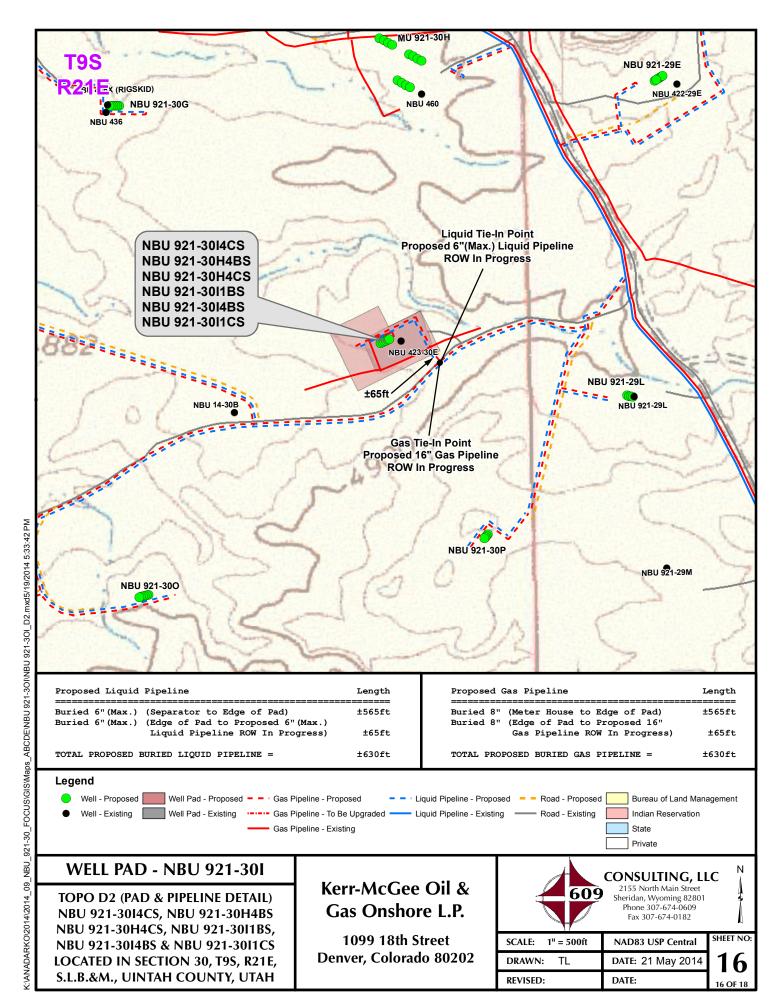
TMBRU	KB. (	435) 789-1365
ENGINEERING	& LAND SURVEYIN ) west - vernal, utah 8	,
DATE PHOTOS TAKEN: 5-8-14	PHOTOS TAKEN BY: J.W.	SHEET NO:
DATE DRAWN: 5-9-14	DRAWN BY: J.G.C.	] 11
Date Last Revised:		11 OF 18

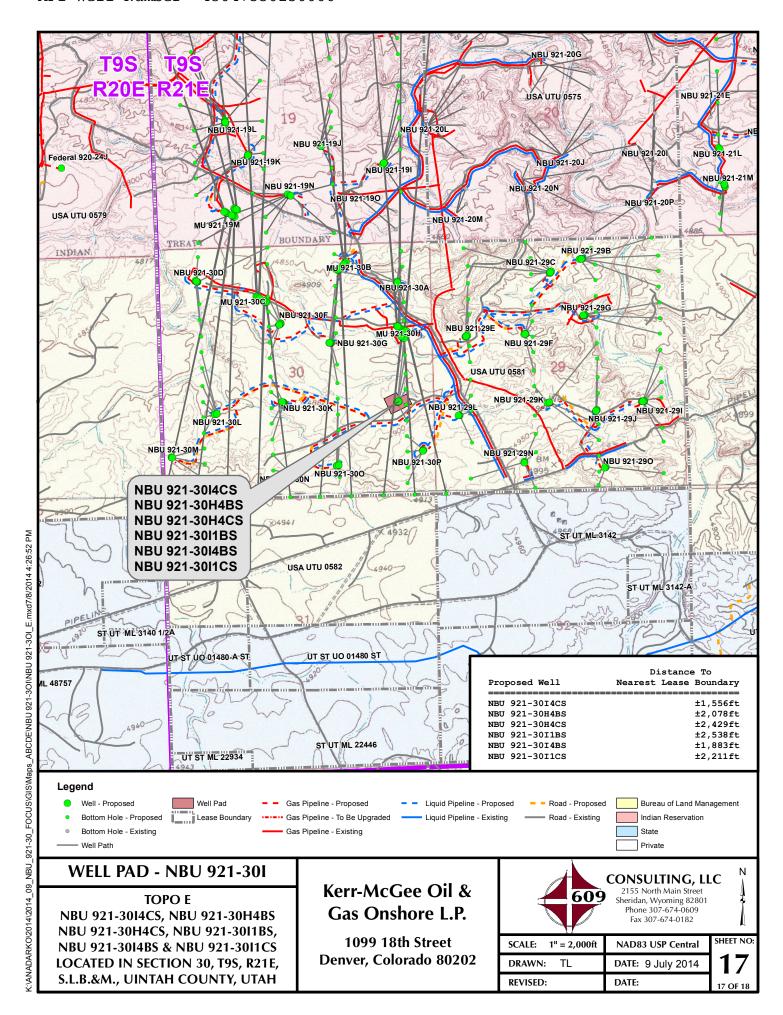












Kerr-McGee Oil & Gas Onshore, LP WELL PAD - NBU 921-30I WELLS –NBU 921-30I4CS, NBU 921-30H4BS, NBU 921-30H4CS, NBU 921-30I1BS, NBU 921-30I4BS & NBU 921-30I1CS SECTION 30, T9S, R21E, S.L.B.&M. UINTAH COUNTY, UTAH

From the intersection of U.S. Highway 40 and 500 East Street in Vernal, Utah, proceed in an easterly, then southerly direction along U.S. Highway 40 approximately 3.3 miles to the junction of State Highway 45. Exit right and proceed in a southerly direction along State Highway 45 approximately 20.2 miles to the junction of the Glen Bench Road (County B Road 3260). Exit right and proceed in a southwesterly direction along the Glen Bench Road approximately 17.7 miles to a Class D County Road to the southwest. Exit right and proceed in a southwesterly direction along the Class D County Road approximately 3.9 miles to a second Class D County Road to the northwest. Exit right and proceed in a northwesterly direction along the second Class D County Road approximately 0.4 miles to a service road to the southwest. Exit left and proceed in a southwesterly direction along the service road approximately 0.2 miles to the proposed access road to the northwest. Exit right and follow road flags in a northwesterly direction approximately 25 feet to the proposed well location

Total distance from Vernal, Utah to the proposed well location is approximately 45.7 miles in a southerly direction.

**SHEET 18 OF 18** 

API Well Number: 43047 5 60 000000 - UTM (feet), NAD27, Zone 12N

Scientific Drilling

Site: NBU 921-301 PAD Well: NBU 921-30H4BS

Wellbore: OH

Design: PLAN #1 PRELIMINARY



WELL DETAILS: NBU 921-30H4BS

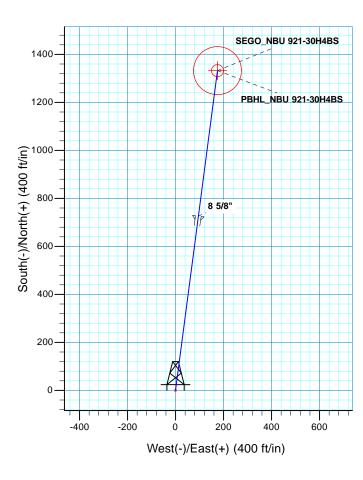
GL 4891 & KB 4 @ 4895.00ft (ASSUMED)

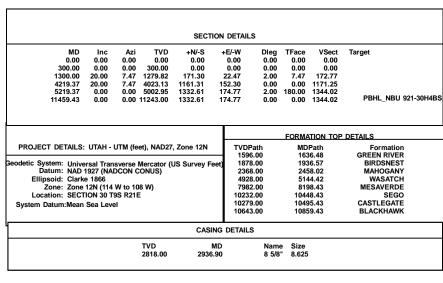
+N/-S +E/-W Northing Easting Latittude Longitude
0.00 0.00 14531045.45 2036165.57 40.0051170 -109.5868250

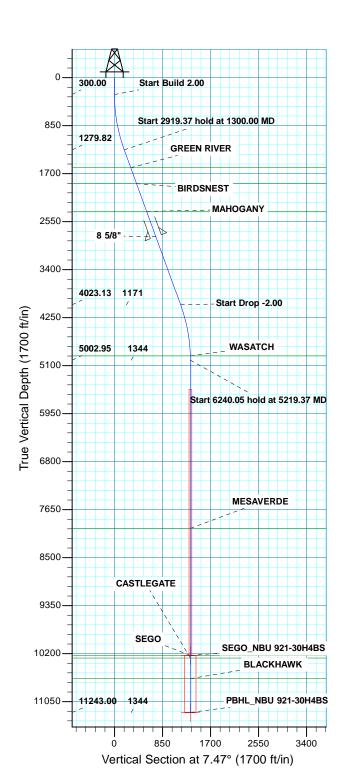


Azimuths to True North Magnetic North: 10.83°

Magnetic Field Strength: 51897.1snT Dip Angle: 65.77° Date: 2014/08/13 Model: BGGM2014









# **US ROCKIES REGION PLANNING**

UTAH - UTM (feet), NAD27, Zone 12N NBU 921-30I PAD NBU 921-30H4BS

OH

Plan: PLAN #1 PRELIMINARY

# **Standard Planning Report**

15 August, 2014





#### Planning Report



EDM 5000.1 Single User Db Database: Company:

US ROCKIES REGION PLANNING UTAH - UTM (feet), NAD27, Zone 12N

Site: NBU 921-30I PAD Well: NBU 921-30H4BS

Wellbore: ОН

Project:

PLAN #1 PRELIMINARY Design:

**Local Co-ordinate Reference:** 

**TVD Reference:** MD Reference: North Reference:

**Survey Calculation Method:** 

Well NBU 921-30H4BS

GL 4891 & KB 4 @ 4895.00ft (ASSUMED) GL 4891 & KB 4 @ 4895.00ft (ASSUMED)

Minimum Curvature

Project UTAH - UTM (feet), NAD27, Zone 12N

Map System: Universal Transverse Mercator (US Survey Feet)

NAD 1927 (NADCON CONUS) Geo Datum: Zone 12N (114 W to 108 W) Map Zone:

System Datum: Mean Sea Level

NBU 921-30I PAD, SECTION 30 T9S R21E Site

Northing: 14,531,045.45 usft Site Position: Latitude: 40.0051170 From: Lat/Long Easting: 2,036,165.57 usft Longitude: -109.5868250 **Position Uncertainty:** 0.00 ft Slot Radius: **Grid Convergence:** 0.91 13.200 in

Well NBU 921-30H4BS, 1948 FSL 716 FEL

**Well Position** +N/-S 0.00 ft 14,531,045.45 usft Latitude: 40.0051170 Northing: +E/-W 0.00 ft Easting: 2,036,165.57 usft Longitude: -109.5868250

**Position Uncertainty** 0.00 ft Wellhead Elevation: 0.00 ft **Ground Level:** 4,891.00 ft

Wellbore ОН Magnetics **Model Name** Sample Date Declination **Dip Angle** Field Strength (nT) (°) (°) BGGM2014 2014/08/13 10.83 65.77 51,897

PLAN #1 PRELIMINARY Design Audit Notes: Version: Phase: PLAN Tie On Depth: 0.00 **Vertical Section:** Depth From (TVD) +N/-S +E/-W Direction (ft) (ft) (ft) (°) 0.00 0.00 0.00 7.47

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,300.00	20.00	7.47	1,279.82	171.30	22.47	2.00	2.00	0.00	7.47	
4,219.38	20.00	7.47	4,023.13	1,161.31	152.30	0.00	0.00	0.00	0.00	
5,219.38	0.00	0.00	5,002.95	1,332.61	174.77	2.00	-2.00	0.00	180.00	
11,459.43	0.00	0.00	11,243.00	1,332.61	174.77	0.00	0.00	0.00	0.00 PE	HL_NBU 921-30H





EDM 5000.1 Single User Db Database: Company: Project:

US ROCKIES REGION PLANNING UTAH - UTM (feet), NAD27, Zone 12N

NBU 921-30I PAD Site: Well: NBU 921-30H4BS

Wellbore: ОН

Design: PLAN #1 PRELIMINARY Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

**Survey Calculation Method:** 

Well NBU 921-30H4BS

GL 4891 & KB 4 @ 4895.00ft (ASSUMED) GL 4891 & KB 4 @ 4895.00ft (ASSUMED)

True

anned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00 200.00	0.00 0.00	0.00 0.00	100.00 200.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.		0.00	000.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	2.00	7.47	399.98	1.73	0.23	1.75	2.00	2.00	0.00
500.00	4.00	7.47	499.84	6.92	0.91	6.98	2.00	2.00	0.00
600.00	6.00	7.47	599.45	15.56	2.04	15.69	2.00	2.00	0.00
700.00	8.00	7.47	698.70	27.64	3.63	27.88	2.00	2.00	0.00
800.00	10.00	7.47	797.47	43.15	5.66	43.52	2.00	2.00	0.00
900.00	12.00	7.47	895.62	62.07	8.14	62.60	2.00	2.00	0.00
1,000.00	14.00	7.47	993.06	84.37	11.07	85.10	2.00	2.00	0.00
1,100.00	16.00	7.47	1,089.64	110.03	14.43	110.98	2.00	2.00	0.00
1,200.00	18.00	7.47	1,185.27	139.02	18.23	140.21	2.00	2.00	0.00
1,300.00	20.00	7.47	1,279.82	171.30	22.47	172.77	2.00	2.00	0.00
·	hold at 1300.00		,						
1,400.00	20.00	7.47	1,373.78	205.21	26.91	206.97	0.00	0.00	0.00
1,500.00	20.00	7.47	1,467.75	239.12	31.36	241.17	0.00	0.00	0.00
1,600.00	20.00	7.47	1,561.72	273.04	35.81	275.37	0.00	0.00	0.00
1,636.48	20.00	7.47	1,596.00	285.41	37.43	287.85	0.00	0.00	0.00
GREEN RIVE									
1,700.00	20.00	7.47	1,655.69	306.95	40.25	309.58	0.00	0.00	0.00
1,800.00	20.00	7.47	1,749.66	340.86	44.70	343.78	0.00	0.00	0.00
1,900.00	20.00	7.47	1,843.63	374.77	49.15	377.98	0.00	0.00	0.00
1,936.57	20.00	7.47	1,878.00	387.17	50.78	390.49	0.00	0.00	0.00
BIRDSNEST	20.00	7.47	1,070.00	007.17	50.76	000.40	0.00	0.00	0.00
2,000.00	20.00	7.47	1,937.60	408.68	53.60	412.18	0.00	0.00	0.00
2,100.00	20.00	7.47	2,031.57	442.59	58.04	446.38	0.00	0.00	0.00
2,200.00	20.00	7.47	2,125.54	476.51	62.49	480.59	0.00	0.00	0.00
2,300.00	20.00	7.47	2,219.51	510.42	66.94	514.79	0.00	0.00	0.00
2,400.00	20.00	7.47	2,313.48	544.33	71.39	548.99	0.00	0.00	0.00
2,458.02	20.00	7.47	2,368.00	564.01	73.97	568.83	0.00	0.00	0.00
MAHOGANY	20.00	7 47	0.407.45	F70 04	75.00	502.40	0.00	0.00	0.00
2,500.00 2,600.00	20.00 20.00	7.47 7.47	2,407.45 2,501.42	578.24 612.15	75.83 80.28	583.19 617.39	0.00 0.00	0.00 0.00	0.00 0.00
2,700.00	20.00	7.47	2,595.39	646.06	84.73	651.60	0.00	0.00	0.00
2,800.00	20.00	7.47	2,689.35	679.98	89.18	685.80	0.00	0.00	0.00
2,900.00	20.00	7.47	2,783.32	713.89	93.62	720.00	0.00	0.00	0.00
2,936.90	20.00	7.47	2,818.00	726.40	95.26	732.62	0.00	0.00	0.00
8 5/8"	22.25		0.077.00	7.17.00	22.25	75.4.00	2.22	2.22	0.00
3,000.00	20.00	7.47	2,877.29	747.80	98.07	754.20	0.00	0.00	0.00
3,100.00	20.00	7.47	2,971.26	781.71	102.52	788.40	0.00	0.00	0.00
3,200.00	20.00	7.47	3,065.23	815.62	106.97	822.61	0.00	0.00	0.00
3,300.00	20.00	7.47	3,159.20	849.53	111.41	856.81	0.00	0.00	0.00
3,400.00	20.00	7.47	3,253.17	883.45	115.86	891.01	0.00	0.00	0.00
3,500.00	20.00	7.47	3,347.14	917.36	120.31	925.21	0.00	0.00	0.00
3,600.00	20.00	7.47	3,441.11	951.27	124.75	959.41	0.00	0.00	0.00
3,700.00	20.00	7.47	3,535.08	985.18	129.20	993.62	0.00	0.00	0.00
3,800.00	20.00	7.47	3,629.05	1,019.09	133.65	1,027.82	0.00	0.00	0.00
3,900.00	20.00	7.47	3,723.02	1,053.00	138.10	1,062.02	0.00	0.00	0.00
4,000.00	20.00	7.47	3,816.99	1,086.92	142.54	1,096.22	0.00	0.00	0.00
		7.47	3,910.95	1,120.83	146.99	1,130.42	0.00	0.00	0.00
4,100.00	20.00	/ 4 /		7 720 XX			(1 ( )( )		





EDM 5000.1 Single User Db Database: Company: Project:

US ROCKIES REGION PLANNING UTAH - UTM (feet), NAD27, Zone 12N

NBU 921-30I PAD Site: Well: NBU 921-30H4BS Wellbore: ОН

Design: PLAN #1 PRELIMINARY Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

**Survey Calculation Method:** 

Well NBU 921-30H4BS

GL 4891 & KB 4 @ 4895.00ft (ASSUMED) GL 4891 & KB 4 @ 4895.00ft (ASSUMED)

True

		LIMINARY							
nned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,219.38	20.00	7.47	4,023.13	1,161.31	152.30	1,171.25	0.00	0.00	0.00
Start Drop -2									
4,300.00 4,400.00	18.39 16.39	7.47 7.47	4,099.27 4,194.70	1,187.59 1,217.22	155.75 159.63	1,197.76 1,227.64	2.00 2.00	-2.00 -2.00	0.00 0.00
4,500.00	14.39	7.47	4,291.11	1,243.53	163.08	1,254.17	2.00	-2.00	0.00
4,600.00	12.39	7.47	4,388.39	1,266.48	166.09	1,277.33	2.00	-2.00	0.00
4,700.00	10.39	7.47	4,486.41	1,286.06	168.66	1,297.07	2.00	-2.00	0.00
4,800.00	8.39	7.47	4,585.07	1,302.23	170.78	1,313.38	2.00	-2.00	0.00
4,900.00	6.39	7.47	4,684.23	1,314.98	172.45	1,326.24	2.00	-2.00	0.00
5,000.00	4.39	7.47	4,783.79	1,324.29	173.67	1,335.63	2.00	-2.00	0.00
5,100.00	2.39	7.47	4,883.61	1,330.14	174.44	1,341.53	2.00	-2.00	0.00
5,144.42	1.50	7.47	4,928.00	1,331.64	174.64	1,343.04	2.00	-2.00	0.00
WASATCH	1.00		.,020.00	.,5551		.,0.0.01	00		2.00
5,200.00	0.39	7.47	4,983.57	1,332.54	174.76	1,343.96	2.00	-2.00	0.00
5,219.38	0.00	0.00	5,002.95	1,332.61	174.77	1,344.02	2.00	-2.00	0.00
	5 hold at 5219.37		5,552.55	.,552.01		.,511.02	2.00	2.00	0.00
5,300.00	0.00	0.00	5,083.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
5,400.00	0.00	0.00	5,183.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
5,500.00	0.00	0.00	5,283.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
5,600.00	0.00	0.00	5,383.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
5,700.00	0.00	0.00	5,483.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
5,800.00	0.00	0.00	5,583.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
5,900.00	0.00	0.00	5,683.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
6,000.00	0.00	0.00	5,783.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
6,100.00	0.00	0.00	5,883.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
6,200.00	0.00	0.00	5,983.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
6,300.00	0.00	0.00	6,083.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
6,400.00	0.00	0.00	6,183.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
6,500.00	0.00	0.00	6,283.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
6,600.00	0.00	0.00	6,383.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
6,700.00	0.00	0.00	6,483.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
6 900 00	0.00	0.00	6 502 57	1 222 61	174 77	1 244 02	0.00	0.00	0.00
6,800.00 6,900.00	0.00 0.00	0.00 0.00	6,583.57 6,683.57	1,332.61 1,332.61	174.77 174.77	1,344.02 1,344.02	0.00 0.00	0.00 0.00	0.00 0.00
7,000.00	0.00	0.00	6,783.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
7,100.00	0.00	0.00	6,883.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
7,100.00	0.00	0.00	6,983.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
7,300.00	0.00	0.00	7,083.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
7,400.00	0.00	0.00	7,183.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
7,500.00	0.00	0.00	7,283.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
7,600.00	0.00	0.00	7,383.57	1,332.61	174.77 174.77	1,344.02	0.00	0.00	0.00
7,700.00	0.00	0.00	7,483.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
7,800.00	0.00	0.00	7,583.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
7,900.00	0.00	0.00	7,683.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
8,000.00	0.00	0.00	7,783.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
8,100.00	0.00	0.00	7,883.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
8,198.43	0.00	0.00	7,982.00	1,332.61	174.77	1,344.02	0.00	0.00	0.00
MESAVERDI	E								
8,200.00	0.00	0.00	7,983.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
8,300.00	0.00	0.00	8,083.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
8,400.00	0.00	0.00	8,183.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
8,500.00	0.00	0.00	8,283.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
8,600.00	0.00	0.00	8,383.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
8,700.00	0.00	0.00	8,483.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00





Database: Company: Project: EDM 5000.1 Single User Db US ROCKIES REGION PLANNING UTAH - UTM (feet), NAD27, Zone 12N

 Site:
 NBU 921-30I PAD

 Well:
 NBU 921-30H4BS

Wellbore:

Design: PLAN #1 PRELIMINARY

ОН

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well NBU 921-30H4BS

GL 4891 & KB 4 @ 4895.00ft (ASSUMED) GL 4891 & KB 4 @ 4895.00ft (ASSUMED)

True

Measured Depth									
(ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,800.00	0.00	0.00	8,583.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
8,900.00	0.00	0.00	8,683.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
9,000.00	0.00	0.00	8,783.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
9,100.00	0.00	0.00	8,883.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
9,200.00	0.00	0.00	8,983.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
9,300.00	0.00	0.00	9,083.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
9,400.00	0.00	0.00	9,183.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
9,500.00	0.00	0.00	9,283.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
9,600.00	0.00	0.00	9,383.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
9,700.00	0.00	0.00	9,483.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
9,800.00	0.00	0.00	9,583.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
9,900.00	0.00	0.00	9,683.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
10,000.00	0.00	0.00	9,783.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
10,100.00	0.00	0.00	9,883.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
10,200.00	0.00	0.00	9,983.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
10,300.00	0.00	0.00	10,083.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
10,400.00	0.00	0.00	10,183.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
10,448.43	0.00	0.00	10,232.00	1,332.61	174.77	1,344.02	0.00	0.00	0.00
SEGO - SEGO	O_NBU 921-30H	I4BS							
10,495.43	0.00	0.00	10,279.00	1,332.61	174.77	1,344.02	0.00	0.00	0.00
CASTLEGATI	E								
10,500.00	0.00	0.00	10,283.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
10,600.00	0.00	0.00	10,383.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
10,700.00	0.00	0.00	10,483.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
10,800.00	0.00	0.00	10,583.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
10,859.43	0.00	0.00	10,643.00	1,332.61	174.77	1,344.02	0.00	0.00	0.00
BLACKHAW	<b>&lt;</b>								
10,900.00	0.00	0.00	10,683.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
11,000.00	0.00	0.00	10,783.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
11,100.00	0.00	0.00	10,883.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
11,200.00	0.00	0.00	10,983.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
11,300.00	0.00	0.00	11,083.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
11,400.00	0.00	0.00	11,183.57	1,332.61	174.77	1,344.02	0.00	0.00	0.00
11,459.43	0.00	0.00	11,243.00	1,332.61	174.77	1,344.02	0.00	0.00	0.00

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SEGO_NBU 921-30H4B - plan hits target cente - Circle (radius 25.00)		0.00	10,232.00	1,332.61	174.77	14,532,380.66	2,036,319.18	40.0087760	-109.5862010
PBHL_NBU 921-30H4B: - plan hits target cente - Circle (radius 100.00		0.00	11,243.00	1,332.61	174.77	14,532,380.66	2,036,319.18	40.0087760	-109.5862010





Database: EDM 5000.1 Single User Db Company: US ROCKIES REGION PLAI

US ROCKIES REGION PLANNING UTAH - UTM (feet), NAD27, Zone 12N

NBU 921-30I PAD NBU 921-30H4BS

Wellbore: OH

Project:

Site:

Well:

Design: PLAN #1 PRELIMINARY

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well NBU 921-30H4BS

GL 4891 & KB 4 @ 4895.00ft (ASSUMED) GL 4891 & KB 4 @ 4895.00ft (ASSUMED)

True

Casing Points						
	Measured	Vertical			Casing	Hole
	Depth	Depth			Diameter	Diameter
	(ft)	(ft)		Name	(in)	(in)
	2.936.90	2.818.00 8	8 5/8"		8.625	11.000

Formations							
	Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
	1,636.48	1,587.00	GREEN RIVER				
	1,936.57	1,869.00	BIRDSNEST				
	2,458.02	2,359.00	MAHOGANY				
	5,144.42	4,919.00	WASATCH				
	8,198.43	7,973.00	MESAVERDE				
	10,448.43	10,223.00	SEGO				
	10,495.43	10,270.00	CASTLEGATE				
	10,859.43	10,634.00	BLACKHAWK				

Plan Annotations				
Measured	Vertical	Local Coor	dinates	
Depth	Depth	+N/-S	+E/-W	
(ft)	(ft)	(ft)	(ft)	Comment
300.00	300.00	0.00	0.00	Start Build 2.00
1,300.00	1,279.82	171.30	22.47	Start 2919.37 hold at 1300.00 MD
4,219.38	4,023.13	1,161.31	152.30	Start Drop -2.00
5,219.38	5,002.95	1,332.61	174.77	Start 6240.05 hold at 5219.37 MD
11,459.43	11,243.00	1,332.61	174.77	TD at 11459.43

# Kerr-McGee Oil & Gas Onshore. L.P.

# **NBU 921-30I PAD**

<u>API #</u>	_	NBU 921-30H4BS	_	
Surfac	ce:	1948 FSL / 716 FEL	NESE	Lot
В	HL:	2008 FNL / 537 FEL	SENE	Lot
<u>API #</u>	ı	NBU 921-30H4CS		
Surfac	ce: <b>-</b>	1952 FSL / 707 FEL	- NESE	Lot
В	HL:	2372 FNL / 530 FEL	SENE	Lot
<u>A</u> PI #	ı	NBU 921-30I1BS		
 Surfac	ce:	1956 FSL / 697 FEL	- NESE	Lot
В	HL:	2538 FSL / 530 FEL	NESE	Lot
<u>API #</u>	İ	NBU 921-3011CS		
Surfac	ce:	1964 FSL / 679 FEL	NESE	Lot
В	HL:	2211 FSL / 530 FEL	NESE	Lot
<u>A</u> PI #	ı	NBU 921-30I4BS		
Surfac	ce: <b>-</b>	1960 FSL / 688 FEL	- NESE	Lot
В	HL:	1883 FSL / 530 FEL	NESE	Lot
API#	i	NBU 921-30I4CS		
	_		- NECE	l ot
Surfac	Je: HL:	1943 FSL / 725 FEL 1556 FSL / 530 FEL	NESE	Lot
D	ΠL.	1000 F3L / 000 FEL	NESE	Lot

This Surface Use Plan of Operations (SUPO) or 13-point plan provides site-specific information for the above-referenced wells.

In accordance with Utah Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling, these wells will be directionally drilled. Refer to Topo Map A for directions to the location and Topo Maps A and B for location of access roads within a 2-mile radius.

An on-site meeting was held on June 17, 2014. Present were:

- · Tyler Cox, Nate Packer BLM;
- · Mitch Batty Timberline Engineering & Land Surveying, Inc.;

NBU 921-30H4BS/ 921-30H4CS/ 921-30I1BS/ 921-30I1CS/ 921-30I4BS/ 921-30I4CS Kerr-McGee Oil Gas Onshore, L.P.

Surface Use Plan of Operations 2 of 7

Joel Malefyt, Roger Parry, Chad Perry, Doreen Green, Chantill Recker, Ryan Abeloe Laura Abrams, Andy Lytle, Doyle Holmes - Kerr-McGee; Alex Bartlett - ICF

# A. Existing Roads:

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated May 13, 2014.

Please refer to Topo B for existing roads.

#### B. New or Reconstructed Access Roads:

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated May 13, 2014.

The following segments are "on-lease"

±25' (0.00 miles) – Section 30 T9S R21E (NE/4 SE/4) – On-lease UTU0581, from the edge of pad to the intersection in NE/4 SE/4. Please refer to Topo B.

#### C. Location of Existing Wells:

Please refer to Topo C for exiting wells.

## D. Location of Existing and/or Proposed Facilities:

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated May 13, 2014.

This pad will expand the existing pad for the NBU 423-30E, which is a producing gas well according to Utah Division of Oil, Gas and Mining (UDOGM) records on August 15, 2014. Gathering (pipeline) infrastructure will be utilized to collect and transport gas and fluids from the wells which are owned and operated by Kerr McGee Oil and Gas Onshore LP (Kerr-McGee).

## **GAS GATHERING**

Please refer to Exhibit A and Topo D2- Pad and Pipeline Detail.

The total gas gathering pipeline distance from the meter to the tie in point is  $\pm 630$ ' and the individual segments are broken up as follows:

The following segments are "onlease", no ROW needed.

- ±565' (0.1 miles) Section 30 T9S R21E (NE/4 SE/4) On-lease UTU0581, BLM surface, New 8" buried gas gathering pipeline from the meter to the edge of the pad. Please refer to Topo D2 Pad and Pipeline Detail.
- ±65' (0.0 miles) Section 30 T9S R21E (NE/4 SE/4) On-lease UTU0581, BLM surface, New 8" buried gas gathering pipeline from the edge of the pad to proposed 16" gas pipeline (ROW in progress) Please refer to Topo D2 Pad and Pipeline Detail.

NBU 921-30H4BS/ 921-30H4CS/ 921-30I1BS/ 921-30I1CS/ 921-30I4BS/ 921-30I4CS Kerr-McGee Oil Gas Onshore, L.P.

Surface Use Plan of Operations 3 of 7

## **LIQUID GATHERING**

Please refer to Exhibit B and Topo D2- Pad and Pipeline Detail.

The total liquid gathering pipeline distance from the separator to the tie in point is  $\pm 630$ ' and the individual segments are broken up as follows:

# The following segments are "onlease", no ROW needed.

- ±565' (0.1 miles) Section 30 T9S R21E (NE/4 SE/4) On-lease UTU0581, BLM surface, New 6" buried liquid gathering pipeline from the separator to the edge of the pad. Please refer to Topo D2 Pad and Pipeline Detail.
- ±65' (0.0 miles) Section 30 T9S R21E (NE/4 SE/4) On-lease UTU0581, BLM surface, New 6" buried liquid gathering pipeline from the edge of pad to proposed 6" liquid pipeline (ROW in progress) Please refer to Topo D2 Pad and Pipeline Detail.

## **Pipeline Gathering Construction**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated May 13, 2014.

#### The Anadarko Completions Transportation System (ACTS) information:

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated May 13, 2014.

Please refer to Exhibit C for ACTS Lines

## E. Location and Types of Water Supply:

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated May 13, 2014.

Water will be hauled to location over the roads marked on Maps A and B.

#### F. Construction Materials:

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated May 13, 2014.

#### **G.** Methods for Handling Waste:

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated May 13, 2014.

# **Materials Management**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated May 13, 2014.

#### H. Ancillary Facilities:

NBU 921-30H4BS/ 921-30H4CS/ 921-30I1BS/ 921-30I1CS/ 921-30I4BS/ 921-30I4CS Kerr-McGee Oil Gas Onshore, L.P.

Surface Use Plan of Operations 4 of 7

No additional ancillary facilities are planned for this location.

# I. Well Site Layout:

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated May 13, 2014.

#### J. Plans for Surface Reclamation:

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated May 13, 2014.

#### **Interim Reclamation**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated May 13, 2014.

#### **Final Reclamation**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated May 13, 2014.

#### **Measures Common to Interim and Final Reclamation**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated May 13, 2014.

#### Weed Control

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated May 13, 2014.

## **Monitoring**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated May 13, 2014.

#### **K.** Surface/Mineral Ownership:

United States of America Bureau of Land Management 170 South 500 East Vernal, UT 84078 (435)781-4400

#### L. Other Information:

# **Cultural and Paleontological Resources**

Please refer to the Standard Operating Practices on file at the BLM Vernal Field Office dated May 13, 2014.

#### **Resource Reports:**

NBU 921-30H4BS/ 921-30H4CS/ 921-30I1BS/ 921-30I1CS/ 921-30I4BS/ 921-30I4CS Kerr-McGee Oil Gas Onshore, L.P.

Surface Use Plan of Operations 5 of 7

A Class I literature survey was completed on July 17, 2014 by Montgomery Archaeological Consultants, Inc (MOAC). For additional details please refer to report MOAC 14-189.

A paleontological reconnaissance survey was completed on August 7, 2014 by SWCA Environmental Consultants. For additional details please refer to report UT14-14314-122.

Biological field survey was completed on July 21, 2014 by Grasslands Consulting, Inc (GCI). For additional details please refer to report GCI-938.

# **Proposed Action Annual Emissions Tables:**

Please refer to the Appendix in the Standard Operating Practices on file at the BLM Vernal Field Office dated May 13, 2014.

NBU 921-30H4BS/ 921-30H4CS/ 921-30I1BS/ 921-30I1CS/ 921-30I4BS/ 921-30I4CS Kerr-McGee Oil Gas Onshore, L.P.

Surface Use Plan of Operations 6 of 7

# M. Lessee's or Operators' Representative & Certification:

Joel Malefyt Regulatory Analyst Kerr-McGee Oil & Gas Onshore LP PO Box 173779 Denver, CO 80217-3779 (720) 929-6828 Scott Rovira General Manager, Drilling Kerr-McGee Oil & Gas Onshore LP PO Box 173779 Denver, CO 80217-3779 (720) 929-6243

Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Kerr-McGee Oil & Gas Onshore LP is considered to be the operator of the subject well. Kerr-McGee Oil & Gas Onshore LP agrees to be responsible under terms and conditions of the lease for the operations conducted upon leased lands.

Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by Bureau of Land Management Nationwide Bond WYB000291.

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that I have full knowledge of the State and Federal laws applicable to this operation; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

NBU 921-30H4BS/ 921-30H4CS/ 921-30I1BS/ 921-30I1CS/ 921-30I4BS/ 921-30I4CS Kerr-McGee Oil Gas Onshore, L.P.

Surface Use Plan of Operations 7 of 7

August 15, 2014

Date

Joel Malefyt

Kerr-McGee Oil & Gas Onshore L.P., wholly owned subsidiary of Anadarko Petroleum Corporation, Standard Operating Practice Agreement for the Greater Natural Buttes Field

# **Drilling Program**

All lease and/or unit operations will be conducted in such a manner that full compliance is made with applicable laws, regulations, Onshore Oil and Gas Orders, and the approved plan of operation. As Operator, KMG is fully responsible for actions of subcontractors. A copy of these Standard Operating Practices will be furnished to the field representatives to insure compliance.

# **Bureau of Land Management Notification Requirements:**

**Location Constructions**: At least 48 hours prior to construction of location and access roads including notification, if applicable, to other surface management agencies, such as Ute Tribe Energy and Mineral Department, State of Utah, or private surface owner(s).

**Location Completion:** Prior to moving on the drilling rig

**Spud Notice:** At least 24 hours prior to spudding the well.

**Casing String and Cementing:** At least 24 hours prior to running casing and cementing all casing.

**Blow Out Preventer & Related Equipment Tests:** At least 24 hours prior to initiating pressure tests.

**First Production Notice:** Within 5 days after a new well begins production; or, within 5 days of when production resumes after a well has been off production for more than 90 days.

Details of the on-site inspection, including date, time, weather conditions, and individuals present, will be submitted with the site-specific Application for Permit to Drill (APD).

# 1. Estimated Tops of Important Geologic Markers:

Formation and depths will be submitted with site-specific APDs.

# 2. Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:

Formation and depths will be submitted with site-specific APDs.

# 3. Pressure Control Equipment:

Pressure Control Equipment Schematic is attached as appendix F. Any variance will be included in the site-specific APDs.

## 4. Proposed Casing & Cementing Program:

Proposed casing and cementing will be submitted with site-specific APDs.

## 5. Drilling Fluids Program:

Proposed drilling fluids will be submitted with site-specific APDs.

## **6.** Evaluation Program:

Evaluation program will be submitted with site-specific APDs.

#### 7. Abnormal Conditions:

Any abnormal condition will be submitted with site specific APDs.

## 8. Anticipated Starting Dates:

Drilling is planned to commence within the administrative period of an approved application.

#### 9. Variances:

KMG respectfully requests a variance to several requirements associated with air drilling outlined in OSO 2:

#### Variance for air drilling

Air rig is only used by KMG to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig and is used to drill and construct the majority of the wellbore.

KMG typically utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 3,200 MD. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig

also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 12 1/4 inch hole for the first 200 feet, then will drill an 11inch hole to just above the Bird's Nest Interval. with an air hammer. The hammer is then tripped and replaced with an 11 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 8-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

## **Variance for BOPE Requirements**

The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

## **Variance for Mud Material Requirements**

OSO 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump, which is located near the reserve pit, will supply the water to the well bore.

## **Variance for Special Drilling Operation (surface equipment placement)**

OSO 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location.

Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors are located on the rig (1250 cfm) and on a standby trailer (1170 cfm). A booster sits between the two compressors and

boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

Lastly, OSO 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

## **Variance for FIT Requirements**

KMG also respectfully requests a variance to OSO 2, Section III, Part Bi, for the pressure integrity test (PIT, also known as a formation integrity test (FIT)). These wells are not exploratory wells and are being drilled in an area where the formation integrity is well known.

#### 10. Other Information:

Drilling Program will be submitted with site-specific APDs.

## SURFACE USE PROGRAM

## A. Existing Roads:

Existing roads consist of county and improved/unimproved access roads (two-tracks). In accordance with OSO 1, KMG will improve or maintain existing roads in a condition that is the same as or better than before operations began. New or reconstructed proposed access roads are discussed in Section B.

The existing roads will be maintained in a safe and usable condition. Maintenance for existing roads will continue until final abandonment and reclamation of well pads and/or other facilities, as applicable. Road maintenance will include, but is not limited to, blading, ditching, and/or culvert installation and cleanout. To ensure safe operating conditions, gravel surfacing may be performed where excessive rutting or erosion may occur. Dust control may be performed as necessary to ensure safe operating conditions.

Roads, gathering lines and electrical distribution lines may occupy common disturbance corridors where possible. Where available, roadways may be used as the staging area and working space for installation of gathering lines. All disturbances located in the same corridor may overlap each other to the maximum extent possible, while maintaining safe and sound construction and installation practices. Unless otherwise approved or requested in site specific documents, in no case will the maximum disturbance widths of the access road and utility corridors exceed the widths specified in Part D of this document.

Within individual APDs, please refer to Topo B, for existing roads.

#### **B.** New or Reconstructed Access Roads:

All new or reconstructed roads will be located, designed, and maintained to meet the standards of the BLM's Surface Operating Standards for Oil and Gas Exploration and Development, 4th Edition (Gold Book) (USDI and USDA, 2007). The BLM Manual Section 9113 (1985) will be considered in consultation with the BLM in the design, construction, improvement and maintenance of all new or reconstructed roads. If a new road would cross a water of the United States, KMG will adhere to all applicable US Army Corps of Engineers requirements in cooperation with the Utah Division of Water Rights.

New well pads or pad expansions may require construction of a new access road and/or decommissioning of an older road. Plans, routes, and distances for new roads and road improvements are provided in design packages, exhibits and maps for a project. Project-specific maps are submitted to depict the locations of existing, proposed, and/or decommissioned and include the locations for supporting structures, including, but not limited to, culverts, bridges, low water crossings, range infrastructure, and haul routes, per OSO 1. Designs for cuts and fills, including spoils source and storage areas, are provided with the road designs, as necessary.

Where safety objectives can be met KMG may use unimproved and/or two-track roads for lease operations and to lessen total disturbance. Road designs will be based on the road safety requirements, traffic characteristics, environmental conditions, and the vehicles the road is intended to carry. Generally, newly constructed unpaved lease roads will be crowned and ditched with the running surfaces of the roads approximately 12-18 feet wide and a total road corridor width not to exceed 45 feet, except where noted in the road design for a specific project. Maximum grade will generally not exceed 8%. Borrow ditches will be back sloped 3:1 or less. Construction BMPs will be employed to control onsite and offsite erosion.

Where topography would direct storm water runoff to an access road or well pad, drainage ditches or other common drainage control facilities may be constructed to divert surface water runoff. Drainage features, including culverts, may be constructed or installed prior to commencing other operations, including drilling for facilities placement. Riprap will be placed at the inlet and outlet at the culvert(s). Drainage features will meet the standards of the BLM's Surface Operating Standards for Oil and Gas Exploration and Development, 4th Edition (Gold Book) (USDI and USDA, 2007).

Prior to construction, new access road(s) will be staked according to the requirements of OSO 1. Construction activities will not be conducted using frozen or saturated materials or during periods when significant watershed damage (e.g. rutting, extensive sheet soil erosion, formation of rills/gullies, etc.) is likely to occur. Vegetative debris will not be placed in or under fill embankments.

New road maintenance will include, but is not limited to, blading, ditching, culvert installation and cleanout, gravel surfacing where excessive rutting or erosion may occur and dust control, as necessary to ensure safe operating conditions. All vehicular traffic, personnel movement and construction/restoration operations will be confined to the approved area and to existing roadways and/or access routes.

Snow removal will be conducted on an as-needed basis to accommodate safe travel. Snow removal will occur as necessary throughout the year, as will necessary drainage ditch construction. Removed snow may be stored on permitted well pads to reduce hauling distances and/or at the aerial extent of approved disturbance boundaries to facilitate snow removal for the remainder of the season.

If a county road crossing or encroachment permit is needed, it will be obtained prior to construction.

For individual APDs, refer to Topo B.

## C. Location of Existing Wells:

For individual APDs, refer to Topo C

#### D. Location of Existing and/or Proposed Facilities:

The following will apply if the well is productive: Gathering (pipeline) infrastructure will be utilized to collect and transport gas and fluids from the wells which are owned and operated by Kerr McGee Oil and Gas Onshore LP (KMG). Should the well(s) prove productive, production facilities will be installed on the disturbed portion of each well pad.

A berm may be constructed completely around production components (typically excluding dehy's and/or separators) that contain fluids (i.e. production tanks, produced liquids tanks). The berms will be constructed to hold the capacity of the largest tank and have sufficient freeboard to accommodate a 25 year rainfall event. This includes pumping units. Aboveground structures constructed or installed onsite for 6 months or longer, will be painted a flat, non-reflective, earth-tone color chosen at the onsite in coordination with the BLM (typically Shadow Gray). A production facility layout is provided as part of a project- specific APD, ROW or NOS submission.

## **Gas Gathering**

The gas gathering pipeline is made of steel line pipe, surface is bare pipe and buried is of coated with fusion bonded epoxy coating (or equivalent). The individual segments will be denoted in site-specific APDs.

## **Liquid Gathering**

The individual segments will be denoted in site-specific APDs.

## **Pipeline Gathering Construction**

Gas gathering pipeline(s,) gas lift, or liquids pipelines may be constructed to lie on the surface or be buried. The road and/or well pad may be utilized for construction activities and staging when the pipeline is adjacent to the road or well pad. The area of disturbance during construction from

the edge of road or well pad and for surface and buried pipelines including cross country will typically be 45' temporary disturbance. In addition, KMG requests a permanent 30'disturbance width that will be maintained for the portion adjacent to the road as well as cross country lines. The need for the 30' of permanent disturbance width is for maintenance and repairs.

Above-ground installation will generally not require clearing of vegetation or blading of the surface, except where safety considerations necessitate earthwork. If installation cannot occur on the exact location, pipe may be constructed parallel and adjacent to a road and lifted from the road to the pipeline route. In other cases where a pipeline route is not parallel and adjacent to a road (cross-country between sites), it will be welded/fused in place at a well pad, access road, or designated work area and pulled between connection locations with a suitable piece of equipment. Buried pipelines will generally be installed parallel and adjacent to existing and/or newly constructed roads and within the permitted disturbance corridor. Buried pipelines may vary from 2" (typically fuel gas lines) to 24" (typically transportation lines) in diameter, but 6" to 16 "is typical for a buried gas line. The diameter of liquids pipelines may vary from 2" to 12", but 6"is the typical diameter. Gas lift lines may vary from 2" to 12" diameter, but 6" diameter pipes are generally used for gas lift. If two or more pipelines are present (gas gathering, gas lift, and fluids), they will share a common trench where possible.

When installing a buried pipeline, typically topsoil will be removed, windrowed and placed on the non-working side of the route for later reclamation. Because working room is limited, the spoil may be spread out across the working side and construction will take place on the spoil. The working side of the corridor will be used for pipe stringing, bending, welding and equipment travel. Small areas on the working side displaying ruts or uneven ground will be groomed to facilitate the safe passage of equipment. After the pipelines are installed, spoil will be placed back into the trench, and the topsoil will be redistributed over the disturbed corridor prior to final reclamation. Typical depth of the trench will be 6', but depths may vary according to site-specific conditions (presence of bedrock, etc.). The proposed trench width for the pipeline would range from 18"-48".

The pipeline will be welded along the proposed route and lowered into place. Trenching equipment will cut through the soil or into the bedrock and create good backfill, eliminating the need to remove large rocks. The proposed buried pipeline will be visually and radio-graphically inspected and the entire pipeline will be pneumatically or hydrostatically tested before being placed into service. Routine vehicle traffic will be prevented from using pipeline routes as travel ways by posting signs at the route's intersection with an access road.

The liquid gathering lines will be made of polyethylene or a composite polyethylene/steel or polyethylene/fiberglass that is not subject to internal or external pipe corrosion. The content of the produced fluids to be transferred by the liquid gathering system will be approximately 92% produced water and 8% condensate. Trunk line valve connections for the water gathering system will be below ground but accessible from the surface in order to prevent freezing during winter time.

If pipelines or roads encounter a drainage that could be subject to flooding or surface water during extreme precipitation events, KMG will apply all applicable Army Corps mandates as

well as the BLM's Hydraulic Considerations for pipeline Crossings of Stream Channels (BLM Technical Note 423, April 2007). In addition, all stream and drainage crossings will be evaluated to determine the need for stream alteration permits from the State of Utah Division of Water Rights and if necessary, required permits will be secured. Similarly, where a road or pipeline crossing exists the pipe will be butt welded and buried to a depth between 24 and 48 inches or more. Dirt roads will be cut and restored to a condition equivalent to the existing condition. All Uintah County road encroachment and crossing permits, where applicable, will be obtained prior to crossing construction. In no case will pressure testing of pipelines result in discharge of liquids to the surface.

Pipeline signs will be installed along the route to indicate the pipeline proximity, ownership, and to provide emergency contact phone numbers. Above ground valves and lateral T's will be installed at various locations for production integrity and safety purposes.

Upon completion of the proposed buried pipeline, the entire area of disturbance will be reclaimed to the standards proposed in the Green River District Reclamation Guidelines. Please refer to section J for more details regarding final reclamation.

When no longer deemed necessary by the operator, KMG or its successor will consult with the BLM, Vernal Field Office before terminating of the use of the pipeline(s).

## The Anadarko Completions Transportation System (ACTS) information:

For individual APDs, refer to Exhibit C for the proposed placement of the ACTS temporary lines.

KMG will use either a closed loop drilling system that will require one pit and one storage area to be constructed on the drilling pad or a traditional drilling operation with one pit. The storage area will be used to contain only the de-watered drill cuttings and will be lined and reclaimed according to traditional pit closure standards. The pit will be constructed to allow for completion operations. The completion pit is lined and will be used for the wells drilled on the pad or used as part of our ACTS system which is discussed in more detail below. Using the closed loop drilling system will allow KMG to decrease the amount of disturbance/footprint on location compared to a single large drilling/completion pit.

If KMG does not use a closed loop system, it will construct a drilling reserve pit to contain drill cuttings and for use in completion operations. Depending on the location of the pit, its relation to future drilling locations, the reserve/completion pit may be utilized for the completion of the wells on that pad and/or be used as part of our ACTS system. KMG will use ACTS to optimize the completion processes for multiple pads across the project area which may include up to a section of development. ACTS will facilitate management of completion fluids by utilizing existing reserve pits, or newly constructed completion pits, as well as temporary, surface-laid aluminum liquids transfer lines between pad locations. The pit will be refurbished as follows when a traditional drill pit is used, including mix and pile up drill cuttings with dry dirt, bury the original liner in the pit, walk bottom of pit with cat. KMG will reline the pit with a 30 mil liner and double felt padding. The refurbished or newly constructed pit will be the same size or

smaller as specified in the originally approved ROW/APD. The pit refurbish will be done in a normal procedure and there will be no modification to the pit. All four sides of the completions pit will be fenced in according to standard pit fencing procedures. Netting will be installed over all pits.

Any hydrocarbons collected will be treated and sold at approved sales facilities. A loading/ unloading rack with drip containment will also be installed where water trucks would unload and load to prevent damage caused from pulling hoses in and out of the pit.

ACTS will require temporarily laying multiple 6 inch aluminum water transfer lines on the surface between either existing or refurbished reserve pits. The temporary aluminum transfer lines will be utilized to transport completion fluid being injected and/or recovered during the completion process and will be laid adjacent to existing access roads or pipeline corridors. Upon conclusion of the completion operation, the liquids transfer lines will be flushed with fresh water and purged with compressed air. The contents of the transfer lines will be flushed into a water truck for delivery to another ACTS location or a reserve pit.

The volume of frac fluid transported through a water transfer line will vary, but volume is projected to be approximately 1.75 bbls per 50-foot joint. Although the maximum working pressure is 125 psig, the liquids transfer lines will be operated at a pressure of approximately 30 to 40 psig. KMG will keep the netted pit open for one year from first production of the first produced well on the pad. During this time the surrounding well location completion fluids may be recycled in this pit and utilized for other completion jobs in the area. After one year KMG will backfill the pit and reclaim. If the pit is not needed for an entire year it will be backfilled and reclaimed earlier. KMG understands that due to the temporary nature of this system, BLM considers this a casual use situation; therefore, no permanent ROW or temporary use plan will need to be issued by the BLM.

## E. Location and Types of Water Supply:

Water for drilling and completion operations will be obtained from the following sources: JD Field Services:

Green River: 1087' FSL & 1020' FEL, Sec. 15 – T2N – R22E

RN Industries:

High Pressure: 705' FNL & 675' FWL, Sec. 1 – T6S – R22E

1057' FNL & 390' FWL, Sec. 1 – T6S – R22E 1239' FNL & 52' FEL, Sec. 6 – T6S – R23E

White River: 501' FNL & 1676' FEL, Sec. 9 – T8S – R20E

471' FNL & 1676' FEL, Sec. 9 – T8S – R20E 900' FNL & 550' FEL, Sec. 35 – T9S – R22E 200' FNL & 950' FEL, Sec. 2 – T10S – R22E 275' FSL & 2275' FEL, Sec. 2 – T10S – R22E 122' FSL & 1350' FEL, Sec. 11 – T10S – R22E 1670' FSL & 500' FEL, Sec. 12 – T10S – R22E

959' FNL & 705' FEL, Sec. 13 – T10S – R22E

600' FSL & 900' FEL, Sec. 13 – T10S – R22E

Water Plant: 481' FNL & 2176' FEL, Sec. 9 – T8S – R20E

471' FNL & 2176' FEL, Sec. 9 – T8S – R20E

Frog Pond: 4820' FNL & 1200' FWL, Sec. 33 – T8S – R20E

4850' FNL & 700' FWL, Sec. 33 – T8S – R20E

Blue Tanks: 200' FNL & 405' FEL, Sec. 32 – T4S – R3E

Buggsy's Water Source:

Green River: N 2090' & W 30' from E1/4 corner of Sec. 33 – T8S – R20E

Underground Water Well: N 1850' & W 425' from E1/4 corner of Sec. 33 – T8S – R20E

Water will be hauled to location over the roads marked in the individual APD's Maps A and B.

#### F. Construction Materials:

Construction operations will typically be completed with native materials found on location. Construction materials imported to the site (mineral material aggregate, soils or materials suitable for fill/surfacing) will be obtained from a nearby permitted source (described in site-specific documents). No construction materials will be removed from Federal lands without notifying the BLM. A proposed source location other than an on-location construction site will be designated either via a map or narrative within the project specific materials provided to the BLM.

## **G.** Methods for Handling Waste:

All wastes subject to regulation will be handled in compliance with applicable laws to minimize the potential for leaks or spills to the environment. KMG maintains a Spill Control and Countermeasure Plan for each applicable location, which includes notification requirements, to the BLM and other appropriate agencies, for all reportable spills of oil, produced liquids, and hazardous materials.

Any accidental release, such as a leak or spill in excess of the reportable quantity, as established by 40 CFR Part 117.3, will be reported as per the requirements of Comprehensive Environmental Response, Compensation, and Liability Act, Section 102 B. If a release involves petroleum hydrocarbons or produced liquids, KMG will comply with the notification requirements of NTL-3A.

Drill cuttings and/or drilling fluids may be contained in a reserve/completion pit whether a closed loop system is or isn't utilized and cuttings may be buried in the pit(s) upon closure. Unless specifically approved by the BLM, no oil or other oil-based drilling additives,

chromium/metals-based, or saline muds will be used during drilling. Only fresh water (as specified above), biodegradable polymer soap, bentonite clay, and/or non-toxic additives will be used in the mud system.

If utilizing a closed loop system, drill cuttings and/or drilling fluids may be stored in above ground containers while on the location. All used drilling fluids may be hauled to Anadarko Petroleum Corporation's Mud Plant where it may be recycled for use at future well locations, hauled to a permitted disposal facility, or solidified for incorporation into the pad during interim reclamation practices. Drill cuttings from a closed loop system may be either hauled to an approved Utah Department of Oil, Gas and Mining Commercial Landfarm Disposal Facility or incorporated into the pad location during interim reclamation.

Pits will be constructed to eliminate the accumulation of surface precipitation runoff into the pit (via appropriate placement of subsoil storage areas and/or construction of berms, ditches, etc). Should unexpected liquid petroleum hydrocarbons (crude oil or condensate) be encountered during drilling, completions or well testing, liquid petroleum hydrocarbons will either be contained in test tanks on the well site or evacuated by vacuum trucks and transported to an approved disposal/sales facility. Netting will be placed over pits before any liquids are discharged into pit. Should hydrocarbons be released into a reserve/completion pit, they will be removed as soon as practical and before the netting is removed from the pit. Similarly, hydrocarbon removal will take place prior to the closure of the pit, unless authorization is provided for disposal via alternate pit closure methods (e.g. solidification).

The reserve and/or completion pit will be lined with a synthetic material 30 mil or thicker liner. The bottom and side walls of the pit will be void of any sharp rocks that could puncture the liner. The liner will be installed over smooth fill subgrade that is free of pockets, loose rocks, or other materials (i.e. sand, sifted dirt, bentonite, straw, etc.) that could damage the liner. After evaporation and when dry, the reserve pit liners will be cut off, ripped and/or folded back (as safety considerations allow) as near to the mud surface as possible and buried on location or hauled to a landfill prior to backfilling the pit with a minimum of five feet of soil material.

Where necessary and if conditions allow, produced liquids from newly completed wells may be temporarily disposed of into pits for a period not to exceed 90 days as per OSO 7. Subsequently, permanent approved produced water disposal methods will be employed in accordance with OSO 7 and/or as described in a Water Management Plan (WMP). Revisions to the water source or method of transportation will be subject to written approval from the BLM.

Any additional pits necessary for subsequent operations, such as temporary flare or workover pits, will be contained within the originally approved well pad and disturbance boundaries. Such temporary pits will be backfilled and reclaimed within 180 days of completion of work at a well location.

Pits containing drilling cuttings, mud, and/or completions fluids will be allowed to dry. Any free fluids remaining after one year from reaching total depth, date of completion, and/or determination of inactivity will be removed (as weather conditions allow) to an approved site and

the pit reclaimed. Installation and operation of any sprinklers, pumps, and equipment will ensure that water spray or mist does not drift.

No garbage or non-exempt substances as defined by Resource Conservation and Recovery Act (RCRA) subtitle C will be placed in the reserve pit. All refuse (trash and other solid waste including cans, paper, cable, etc.) generated during construction, drilling, completion, and well testing activities will be contained in an enclosed receptacle, removed from the drill locations promptly, and transported to an approved disposal facility. Immediately after removal of the drilling rig, all debris and other waste materials not contained within trash receptacles will be collected and removed from the well location.

For the protection of livestock and wildlife, all open pits (excluding flare pits) will be fenced or netted to prevent wildlife or livestock entry.

Maximum distance between fence posts shall be no greater than 16 feet. Siphons, catchments, and absorbent pads will be installed to keep hydrocarbons produced by the drilling rig or other equipment on location from entering the reserve pit. Hydrocarbons, contaminated pads, and/or soils will be disposed of in accordance with state and federal requirements.

Portable, self-contained chemical toilets and/or sewage processing facilities will be provided for human waste disposal. Upon completion of operations, or as required, the toilet holding tanks will be pumped and the contents disposed of in an approved sewage disposal facility. All applicable regulations pertaining to disposal of human and solid waste will be observed.

#### **Materials Management**

Hazardous materials above reportable quantities will not be produced by drilling or completing proposed wells or constructing the pipelines/facilities. The term "hazardous materials" as used here means: (1) any substance, pollutant, or containment listed as hazardous under the CERCLA of 1980, as amended 42 U.S.C. 9601 et seq., and the regulations issued under CERCLA; and (2) any hazardous waste as defined in RCRA of 1976, as amended. In addition, no extremely hazardous substance, as defined in 40 CFR 355, in threshold planning quantities, would be used, produced, stored, transported, or disposed of while producing any well.

Hazardous materials may be contained in some grease or lubricants, solvents, acids, paint, and herbicides, among others as defined above. KMG maintains a file, per 29 CFR 1910.1200 (g) containing current Material Safety Data Sheets (MSDS) for all chemicals, compounds, and/or substances that are used during the course of construction, drilling, completion, and production operations for this project. The transport, use, storage and handling of hazardous materials will follow procedures specified by federal and state regulations. Transportation of hazardous materials to the well location is regulated by the Department of Transportation (DOT) under 49 CFR, Parts 171-180. DOT regulations pertain to the packing, container handling, labeling, vehicle placarding, and other safety aspects.

Potentially hazardous materials used in the development or operation of wells will be kept in limited quantities on well sites and at the production facilities for short periods of time.

Chemicals meeting the criteria for being an acutely hazardous material/substance or meet the quantities criteria per BLM Instruction Memorandum No. 93-344 will not be used. Chemicals subject to reporting under Title III of the Superfund Amendments and Reauthorization Act (SARA) in quantities of 10,000 pounds or more may be produced and/or stored at production facilities (crude oil/condensate, produced water). They may also be kept in limited quantities on drilling sites (barite, diesel fuel, cement, cottonseed hulls etc.) for short periods of time during drilling or completion activities.

Any produced water separated from recoverable condensate during well operations will be contained in a water tank and will then be transported by pipeline and/or truck to one of the preapproved disposal sites:

RNI in Sec. 5 T9S R22E NBU #159 in Sec. 35 T9S R21E Ace Oilfield in Sec. 2 T6S R20E MC&MC in Sec. 12 T6S R19E Pipeline Facility in Sec. 36 T9S R20E

Goat Pasture Evaporation Pond in SW/4 Sec. 16 T10S R22E

Bonanza Evaporation Pond in Sec. 2 T10S R23E

Or to one of the following KMG active Salt Water Disposal (SWD) wells:

NBU 159 SWD in Sec. 35 T9S R21E CIGE 112D SWD in Sec. 19 T9S R21E CIGE 114 SWD in Sec. 34 T9S R21E NBU 921-34K SWD in Sec. 34 T9S R21E NBU 921-33F SWD in Sec. 34 T9S R21E

#### H. **Ancillary Facilities:**

If additional ancillary facilities are planned they will be depicted on site specific APDs.

## **Well Site Layout:**

The location, orientation and aerial extent of each drill pad, reserve/completion/flare pit (for closed loop or non-closed loop operations), access road ingress/egress points, drilling rig, dikes/ditches, existing wells/infrastructure, proposed cuts and fills, and topsoil and spoil material stockpile locations are depicted on the exhibits for each project, where applicable.

Site-specific conditions may require slight deviation in actual equipment depending on whether a closed loop system is used. Surface distance may be less if using closed loop. But in either case, the area of disturbance will not exceed the maximum disturbance outlined in the attached exhibits of the APDs.

Each well will utilize either a centralized tank battery, centralized fluids management system, or have tanks installed on its pad. Production/Produced Liquid tanks will be constructed,

maintained, and operated to prevent unauthorized surface or subsurface discharges of liquids and to prevent livestock or wildlife entry. The tanks will be kept reasonably free from surface accumulations of liquid hydrocarbons. The tanks are not to be used for disposal of liquids from additional sources without prior approval of BLM.

#### J. Plans for Surface Reclamation:

The surface reclamation will be undertaken in two phases: interim and final. Interim reclamation is conducted following well completion and extends through the period of production. Interim reclamation is for the area of the well pad that is not required for production activities. Final reclamation is conducted following well plugging/conversion and/or facility abandonment processes.

Reclamation activities in both phases may include but is not limited to the re-contouring or re-configuration of topographic surfaces, restoration of drainage systems, segregation of spoils material, minimizing surface disturbance, re-evaluating backfill requirements, pit closure, topsoil redistribution, soil treatments, seeding and weed control.

#### **Interim Reclamation**

Interim reclamation may include pit evaporation, fluid removal, pit solidification, re-contouring, incorporation of cuttings, ripping, spreading top soil, seeding, and/or weed control. Interim reclamation will be performed in accordance with OSO 1, or written notification will be provided to the BLM for approval. Where feasible, drilling locations, reserve pits, or access routes not utilized for production operations will be re-contoured to a natural appearance.

Interim re-contouring involves bringing all construction material from cuts and fills back onto the well pad and site and reestablishing the natural contours where desirable and practical. Fill and stockpiled spoils no longer necessary to the operation will be spread on the cut slopes and covered with stockpiled topsoil. Stockpiled drill cuttings may also be incorporated into the spoils, recontoured, and covered with stockpiled topsoil. All stockpiled top soils will be used for interim reclamation where practical to maintain soil viability. Where possible, the land surface will be left "rough" after re-contouring to ensure that the maximum surface area will be available to support the reestablishment of vegetative cover.

A reserve pit, upon being allowed to dry, will be backfilled and compacted with cover materials that are void of any topsoil, vegetation, large stones, rocks or foreign objects. Soils that are moisture laden, saturated, or partially/completely frozen will not be used for backfill or cover. The pit area will be mounded to allow for settling and to promote positive surface drainage away from the pit. Disposal of pit fluids and linings is discussed in Section G.

#### **Final Reclamation**

Final reclamation will be performed for unproductive wells and after the end of the life of a productive well. As soon as practical after the conclusion of drilling and testing operations, unproductive drill holes will be plugged and abandoned (P&A). Site and road reclamation will commence following plugging. In no case will reclamation at non-producing locations be initiated later than six (6) months from the date a well is plugged. A joint inspection of the disturbed area to be reclaimed may be requested by KMG. The primary purpose of this inspection will be to review the existing conditions, or agree upon a revised final reclamation and abandonment plan. The BLM will be notified prior to commencement of reclamation operations. A Notice of Intent to Abandon will be filed for final recommendations regarding surface reclamation.

After plugging, all wellhead equipment that is no longer needed will be removed, and the well site will be reclaimed. Final contouring will blend with and follow as close as practical the natural terrain and contours of the original site and surrounding areas. After re-contouring the site and prior to replacing topsoil, final grading and site preparation will be conducted over the entire surface of the well site and access road. The area will be ripped to a depth no greater than 6 inches on 18 to 24-inch centers and the surface soil material will be uniformly pitted with longitudinal depressions perpendicular to the natural flow of water where practical. Following site preparation, topsoil will be spread on the location and prepared for seeding.

Reclamation of roads will be performed at the discretion of the BLM. All unnecessary surface equipment and structures (e.g. cattle guards) and water control structures (e.g. culverts, drainage pipes) not needed to facilitate successful reclamation will be removed during final reclamation. Roads that will be reclaimed will be ripped to a depth of 6 to 24 inches where practical, recontoured to approximate the original contour of the ground and seeded in accordance with the seeding specifications of the BLM.

Upon successfully completing reclamation of a P&A location, a Final Abandonment Notice will be submitted to the BLM.

#### **Measures Common to Interim and Final Reclamation**

Soil tillage will be conducted using a disk in areas needing additional seedbed preparation following site preparation. This will provide primary soil tillage to a depth no greater than 6 inches. Prior to reseeding, compacted areas will be scarified by ripping or chiseling to loosen compacted soils, promote water infiltration, and improve soil aeration and root penetration.

Seeding will occur during optimal soil conditions and will typically be accomplished through the use of a no-till rangeland style seed drill with a "picker box." Additionally an imprinter seeder may be used. An imprinter seeder creates divots to roughen the surface and collect moisture to aid in seed germination. Seed mixes appropriate to the native plant community as determined and specified for each project location based on the site specific soils will be used for revegetation. The seed mixes will be selected from a list provided by or approved by the BLM, or a specific seed mix will be proposed by KMG to the BLM and used after its approval. The selected specific seed mix for each well location and road segment will be utilized while performing interim and final reclamation for each project. All seed will be certified and tags will be

maintained by KMG. Every effort will be made to obtain "cheat grass free seed" and noxious weed free seed.

Seed Mix to be used for Well Site, Access Road, and Pipeline (as applicable):

Bonanza Area Mix	Pure Live Seed lbs/acre
Crested Wheat (Hycrest)	1.5
Bottlebrush Squirreltail	1
Western Wheatgrass (Arriba)	1
Thick Spike Wheatgrass	1.5
Indian Ricegrass	1
Fourwing Saltbush	2
Shadscale	2
Forage Kochia	0.25
Rocky Mountain Bee Plant	0.5
Total	10.75

Natural Buttes Area Mix Option 1:	Pure Live Seed lbs/acre	
Indian Ricegrass (Nezpar)	3	
Thick Spike Wheatgrass	2	
Sandberg bluegrass	0.5	
Bottlebrush squirreltail	1	
Crested wheatgrass (Hycrest)	1	
Winterfat	0.25	
Shadscale	1.5	
Four-wing saltbush	0.75	
Forage Kochia	0.25	
Total	10.25	

## Natural Buttes Area Mix Option 2: Pure Live Seed lbs/acre

Galleta Grass	0.5
Great Basin Wildrye	0.5
Thickspike Wheatgrass	2.5
Indian Ricegrass (Nezpar)	1
Crested Wheatgrass	1
Siberian Wheatgrass	1
Bottlebrush Squirreltail	1
Munro Globemallow	0.1
Palmer Penstemon	0.1
Rocky Mtn beeplant	0.5
Western yarrow	0.1
Shadscale	0.5
Forage Kochia	0.5
m	0.2

#### **Total** 9.3

Natural Buttes Area Mix Option 3:	Pure Live Seed lbs/acre	
Galleta Grass	2	
Sandberg bluegrass	0.5	
Shadscale	0.5	
Bluebunch (secar)	2	
Indian Ricegrass (Nezpar)	2	
Western Wheatgrass (Arriba)	2	
Palmer penstemon	0.25	
Munro Globemallow	0.15	
Black Sage	0.25	
Winterfat	0.25	
Forage Kochia	0.25	
Total	10.15	

Additional soil amendments and/or stabilization may be required on sites with poor soils and/or excessive erosion potential. Where severe erosion can become a problem and/or the use of machinery is not practical, seed will be hand broadcast and raked with twice the specified amount of seed. Slopes will be stabilized using materials specifically designed to prevent erosion on steep slopes and hold seed in place so vegetation can become permanently established. These materials will include, but are not limited to: erosion control blankets, hydro-mulch, and/or bonded fiber matrix at a rate to achieve a minimum of 80 percent soil coverage. Soil amendments such as "Sustain" (an organic fertilizer that will be applied at the rate 1,800 – 2,100 lbs/acre with seed) may also be dry broadcast or applied with hydro-seeding equipment.

#### **Weed Control**

All weed management will be done in accordance with the Vernal BLM Surface Disturbance Weed Policy. Noxious weeds will be controlled, as applicable, on project areas. Monitoring and management of noxious and/or invasive weeds of concern will be completed annually until the project is deemed successfully reclaimed by the surface management agency and/or owner according to the Anadarko Integrated Weed Management Plan. Noxious weed infestations will be mapped using a GPS unit and submitted to the BLM with information required in the Vernal BLM Surface Disturbance Weed Policy. If herbicide is to be applied it will be done according to an approved Pesticide Use Proposal (PUP), inclusive of applicable locations. All pesticide applications will be recorded using a Pesticide Application Record (PAR) and will be submitted along with a Pesticide Use Report (PUR) annually prior to Dec. 31.

#### **Monitoring**

Monitoring of reclaimed project areas will be completed annually during the growing season and actions to ensure reclamation success will be taken as needed. During the first two growing seasons an ocular methodology will be used to determine the success of the reclamation activities. During the 3rd growing season a 100 point line intercept (quantitative) methodology will be used to obtain basal cover. The goal is to have the reclaimed area reach 30% basal cover when compared to the reference site. If after three growing seasons the area has not reached 30% basal cover, additional reclamation activities may be necessary. Monitoring will continue until the reclaimed area reaches 75% basal cover of desirable vegetation when compared to the reference site. (Green River District Reclamation Guidelines).

All monitoring reports will be submitted electronically to the Vernal BLM in the form of a geodatabase no later than March 1st of the calendar year following the data collection.

#### **K.** Surface/Mineral Ownership:

Depicted on site specific APDs.

## L. Other Information:

#### **Cultural and Paleontological Resources**

All personnel are strictly prohibited from collecting artifacts, any paleontological specimens or fossils, and from disturbing any significant cultural resources in the area. If artifacts, fossils, or any culturally sensitive materials are exposed or identified in the area of construction, all construction operations that would affect the newly discovered resource will cease, and KMG will provide immediate notification to the BLM or appropriate SMA.

## **Resource Reports**

Appropriate archaeological and paleontological reconnaissance surveys and biological field surveys will be completed and provide to the BLM for individual APDs.

## **Proposed Action Annual Emissions Tables:**

Appendix A through G contains the emission table per pad based on well count.

## M. Lessee's or Operators' Representative & Certification:

Depicted on site specific APDs.

## **Appendix A:**

**Proposed Action Annual Emissions Tables: 4 Well Pad** 

Table 1: Proposed Action Annual Emissions (tons/year) <sup>1</sup>			
Pollutant	Development	Production	Total
NOx	3.8	1.2	5
CO	2.2	1.08	3.28
VOC	0.1	6.8	6.9
SO <sub>2</sub>	0.005	0.01	0.02
PM <sub>10</sub>	1.7	0.11	1.81
PM <sub>2.5</sub>	0.4	0.05	0.45
Benzene	2.20E-03	0.12	0.12
Toluene	1.60E-03	0.2	0.2
Ethylbenzene	3.40E-04	0.01	0.01
Xylene	1.10E-03	0.09	0.09
n-Hexane	1.70E-04	0.51	0.51
Formaldehyde	1.30E-02	1.30E-04	1.31E-02

<sup>&</sup>lt;sup>1</sup> Emissions include 1 producing well and associated operations traffic during the year in which the project is developed

Table 2: Proposed Action versus 2012 WRAP Phase III Emissions Inventory Comparison

Species	Proposed Action Production Emissions (ton/yr)	WRAP Phase III 2012 Uintah Basin Emission Inventory <sup>a</sup> (ton/yr)	Percentage of Proposed Action to WRAP Phase III
NOx	5	16,547	0.03%
VOC	6.9	127,495	0.01%

<sup>&</sup>lt;sup>a</sup> http://www.wrapair.org/forums/ogwg/PhaseIII\_Inventory.html

## **Appendix B:**

**Proposed Action Annual Emissions Tables: 5 Well Pad** 

Table 1: Proposed Action Annual Emissions (tons/year) <sup>1</sup>			
Pollutant	Development	Production	Total
NOx	3.8	1.5	5.3
CO	2.2	1.08	3.28
VOC	0.1	8.5	8.6
$SO_2$	0.005	0.01	0.02
$PM_{10}$	1.7	0.11	1.81
PM <sub>2.5</sub>	0.4	0.05	0.45
Benzene	2.20E-03	0.12	0.12
Toluene	1.60E-03	0.2	0.2
Ethylbenzene	3.40E-04	0.01	0.01
Xylene	1.10E-03	0.09	0.09
n-Hexane	1.70E-04	0.51	0.51
Formaldehyde	1.30E-02	1.30E-04	1.31E-02

<sup>&</sup>lt;sup>1</sup> Emissions include 1 producing well and associated operations traffic during the year in which the project is developed

Table 2: Proposed Action versus 2012 WRAP Phase III Emissions Inventory Comparison

Species	Proposed Action Production Emissions (ton/yr)	WRAP Phase III 2012 Uintah Basin Emission Inventory <sup>a</sup> (ton/yr)	Percentage of Proposed Action to WRAP Phase III
NOx	5.3	16,547	0.03%
VOC	8.6	127,495	0.01%

<sup>&</sup>lt;sup>a</sup> http://www.wrapair.org/forums/ogwg/PhaseIII\_Inventory.html

## **Appendix C:**

## **Proposed Action Annual Emissions Tables: 6 Well Pad**

Table 1: Proposed Action Annual Emissions (tons/year) <sup>1</sup>			
Pollutant	Development	Production	Total
NOx	3.8	1.8	5.6
CO	2.2	1.08	3.28
VOC	0.1	10.2	10.3
SO <sub>2</sub>	0.005	0.01	0.02
$PM_{10}$	1.7	0.11	1.81
PM <sub>2.5</sub>	0.4	0.05	0.45
Benzene	2.20E-03	0.12	0.12
Toluene	1.60E-03	0.2	0.2
Ethylbenzene	3.40E-04	0.01	0.01
Xylene	1.10E-03	0.09	0.09
n-Hexane	1.70E-04	0.51	0.51
Formaldehyde	1.30E-02	1.30E-04	1.31E-02

<sup>&</sup>lt;sup>1</sup> Emissions include 1 producing well and associated operations traffic during the year in which the project is developed

Table 2: Proposed Action versus 2012 WRAP Phase III Emissions Inventory Comparison			
Species Proposed Action Production Emissions (ton/yr) WRAP Phase III 2012 Uintah Basin Emission Inventory <sup>a</sup> (ton/yr) WRAI  Phase I			
NOx	5.6	16,547	0.03%
VOC	10.3	127,495	0.01%

<sup>a</sup> http://www.wrapair.org/forums/ogwg/PhaseIII\_Inventory.html

Uintah Basin
Data

## **Appendix D:**

## **Proposed Action Annual Emissions Tables: 7 Well Pad**

Table 1: Proposed Action Annual Emissions (tons/year) <sup>1</sup>			
Pollutant	Development	Production	Total
NOx	3.8	2.1	5.9
CO	2.2	1.08	3.28
VOC	0.1	11.9	12
SO <sub>2</sub>	0.005	0.01	0.02
$PM_{10}$	1.7	0.11	1.81
PM <sub>2.5</sub>	0.4	0.05	0.45
Benzene	2.20E-03	0.12	0.12
Toluene	1.60E-03	0.2	0.2
Ethylbenzene	3.40E-04	0.01	0.01
Xylene	1.10E-03	0.09	0.09
n-Hexane	1.70E-04	0.51	0.51
Formaldehyde	1.30E-02	1.30E-04	1.31E-02

<sup>&</sup>lt;sup>1</sup> Emissions include 1 producing well and associated operations traffic during the year in which the project is developed

Table 2: Proposed Action versus 2012 WRAP Phase III Emissions Inventory Comparison				
Species Proposed Action Production Emissions (ton/yr) WRAP Phase III 2012 Uintah Basin Emission Action to WRAP (ton/yr) WRAP Phase II				
NOx	5.9	16,547	0.03%	
VOC	12	127,495	0.01%	

<sup>&</sup>lt;sup>a</sup> http://www.wrapair.org/forums/ogwg/PhaseIII\_Inventory.html

Uintah Basin Data

## **Appendix E:**

**Proposed Action Annual Emissions Tables: 8 Well Pad** 

**Table 1: Proposed Action Annual Emissions (tons/year)**<sup>1</sup>

Pollutant	Development	Production	Total
NOx	3.8	2.4	6.2
CO	2.2	1.08	3.28
VOC	0.1	13.6	13.7
SO <sub>2</sub>	0.005	0.01	0.02
PM <sub>10</sub>	1.7	0.11	1.81
PM <sub>2.5</sub>	0.4	0.05	0.45
Benzene	2.20E-03	0.12	0.12
Toluene	1.60E-03	0.2	0.2
Ethylbenzene	3.40E-04	0.01	0.01
Xylene	1.10E-03	0.09	0.09
n-Hexane	1.70E-04	0.51	0.51
Formaldehyde	1.30E-02	1.30E-04	1.31E-02

<sup>&</sup>lt;sup>1</sup> Emissions include 1 producing well and associated operations traffic during the year in which the project is developed

Table 2: Proposed Action versus 2012 WRAP Phase III Emissions Inventory Comparison						
Species  Proposed Action Production Emissions (ton/yr)  WRAP Phase III 2012 Uintah Basin Emission Action to WRAP  WRAP  (ton/yr)  Phase III						
NOx	6.2 16,547 0.03%					
VOC	OC 13.7 127,495 0.01%					

<sup>&</sup>lt;sup>a</sup> http://www.wrapair.org/forums/ogwg/PhaseIII\_Inventory.html

## Appendix F:

## **Proposed Action Annual Emissions Tables: 10 Well Pad**

Table 1: Proposed Action Annual Emissions (tons/year) <sup>1</sup>						
Pollutant Development Production Total						
NOx	3.8	3	6.8			
CO	2.2	1.08	3.28			
VOC	0.1	17	17.1			
$SO_2$	0.005	0.01	0.02			

$PM_{10}$	1.7	0.11	1.81
PM <sub>2.5</sub>	0.4	0.05	0.45
Benzene	2.20E-03	0.12	0.12
Toluene	1.60E-03	0.2	0.2
Ethylbenzene	3.40E-04	0.01	0.01
Xylene	1.10E-03	0.09	0.09
n-Hexane	1.70E-04	0.51	0.51
Formaldehyde	1.30E-02	1.30E-04	1.31E-02

<sup>&</sup>lt;sup>1</sup> Emissions include 1 producing well and associated operations traffic during the year in which the project is developed

Table 2: Proposed Action versus 2012 WRAP Phase III Emissions Inventory Comparison						
Species Proposed Action Production Emissions (ton/yr) WRAP Phase III 2012 Uintah Basin Emission Action to WRAP (ton/yr) Phase III						
NOx	6.8 16,547 0.03%					
VOC	17.1 127,495 0.01%					

 $<sup>^</sup>a\ http://www.wrapair.org/forums/ogwg/PhaseIII\_Inventory.html$ 

## Appendix G:

**Proposed Action Annual Emissions Tables: 12 Well Pad** 

Table 1: Proposed Action Annual Emissions (tons/year) <sup>1</sup>							
Pollutant Development Production Total							
NOx	3.8	3.6	7.4				
СО	2.2	1.08	3.28				
VOC	0.1	20.4	20.5				
$SO_2$	0.005	0.01	0.02				
$PM_{10}$	1.7	0.11	1.81				
PM <sub>2.5</sub>	0.4	0.05	0.45				

Benzene	2.20E-03	0.12	0.12
Toluene	1.60E-03	0.2	0.2
Ethylbenzene	3.40E-04	0.01	0.01
Xylene	1.10E-03	0.09	0.09
n-Hexane	1.70E-04	0.51	0.51
Formaldehyde	1.30E-02	1.30E-04	1.31E-02

<sup>&</sup>lt;sup>1</sup> Emissions include 1 producing well and associated operations traffic during the year in which the project is developed

Table 2: Proposed Action versus 2012 WRAP Phase III Emissions Inventory Comparison					
Species  Proposed Action Production Emissions (ton/yr)  WRAP Phase III 2012 Uintah Basin Emission Inventory <sup>a</sup> (ton/yr) WRAP Phase III					
NOx	7.4 16,547 0.03%				
VOC	20.5 127,495 0.01%				

<sup>&</sup>lt;sup>a</sup> http://www.wrapair.org/forums/ogwg/PhaseIII\_Inventory.html

## Appendix G:

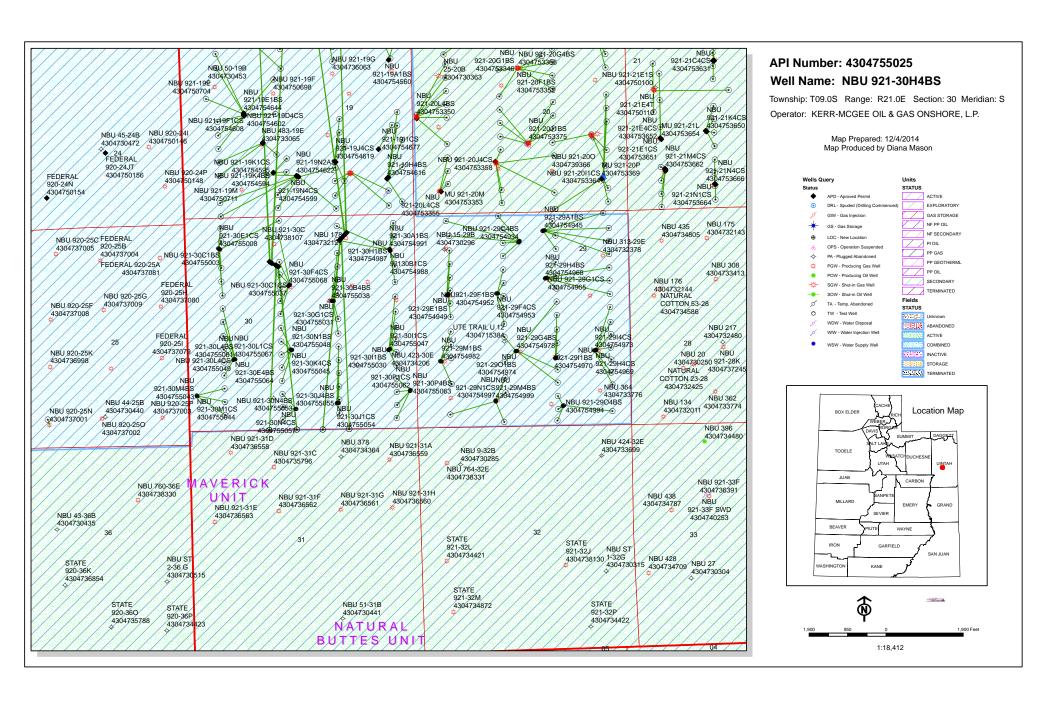
## **Proposed Action Annual Emissions Tables: 15 Well Pad**

Table 1: Proposed Action Annual Emissions (tons/year) <sup>1</sup>				
Pollutant	Development	Production	Total	
NOx	3.8	4.5	8.3	
CO	2.2	1.08	3.28	
VOC	0.1	25.5	25.6	
SO <sub>2</sub>	0.005	0.01	0.02	
PM <sub>10</sub>	1.7	0.11	1.81	
PM <sub>2.5</sub>	0.4	0.05	0.45	
Benzene	2.20E-03	0.12	0.12	
Toluene	1.60E-03	0.2	0.2	
Ethylbenzene	3.40E-04	0.01	0.01	
Xylene	1.10E-03	0.09	0.09	
n-Hexane	1.70E-04	0.51	0.51	
Formaldehyde	1.30E-02	1.30E-04	1.31E-02	

<sup>&</sup>lt;sup>1</sup> Emissions include 1 producing well and associated operations traffic during the year in which the project is developed

Table 2: Proposed Action versus 2012 WRAP Phase III Emissions Inventory Comparison					
Species Proposed Action Production Emissions (ton/yr) WRAP Phase III 2012 Uintah Basin Emission Inventory <sup>a</sup> (ton/yr) WRAP Phase III					
NOx	8.3 16,547 0.03%				
VOC	<b>25.6</b> 127,495 0.01%				

<sup>&</sup>lt;sup>a</sup> http://www.wrapair.org/forums/ogwg/PhaseIII\_Inventory.html



## **United States Department of the Interior**

## BUREAU OF LAND MANAGEMENT

Utah State Office 440 West 200 South, Suite 500 Salt Lake City, UT 84101

IN REPLY REFER TO: 3160 (UT - 922)

December 10, 2014

Memorandum

To: Assistant Field Office Manager Minerals,

Vernal Field Office

From: Michael Coulthard, Petroleum Engineer

Subject: 2014 Plan of Development Natural Buttes Unit

Uintah County, Utah.

Pursuant to email between Diana Mason, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2014 within the Natural Buttes Unit, Uintah County, Utah.

API # WELL NAME LOCATION

(Proposed PZ WASATCH-MESA VERDE)

PAD NBU 921-30I

43-047-55024 NBU 921-30H4CS Sec 30 T09S R21E 1952 FSL 0707 FEL BHL Sec 30 T09S R21E 2372 FNL 0530 FEL 43-047-55025 NBU 921-30H4BS Sec 30 T09S R21E 1948 FSL 0716 FEL BHL Sec 30 T09S R21E 2008 FNL 0537 FEL Sec 30 T09S R21E 1956 FSL 0697 FEL 43-047-55030 NBU 921-30I1BS BHL Sec 30 T09S R21E 2538 FSL 0530 FEL 43-047-55034 NBU 921-30I4BS Sec 30 T09S R21E 1960 FSL 0688 FEL BHL Sec 30 T09S R21E 1883 FSL 0530 FEL 43-047-55035 NBU 921-30I4CS Sec 30 T09S R21E 1943 FSL 0725 FEL BHL Sec 30 T09S R21E 1556 FSL 0530 FEL 43-047-55047 NBU 921-30I1CS Sec 30 T09S R21E 1964 FSL 0679 FEL BHL Sec 30 T09S R21E 2211 FSL 0530 FEL PAD NBU 921-30K Sec 30 T09S R21E 1996 FSL 2532 FWL 43-047-55026 NBU 921-30K1CS BHL Sec 30 T09S R21E 2203 FSL 2308 FWL Sec 30 T09S R21E 1990 FSL 2551 FWL 43-047-55027 NBU 921-30K1BS BHL Sec 30 T09S R21E 2529 FSL 2308 FWL 43-047-55045 NBU 921-30K4CS Sec 30 T09S R21E 1987 FSL 2561 FWL BHL Sec 30 T09S R21E 1551 FSL 2307 FWL Sec 30 T09S R21E 1993 FSL 2542 FWL 43-047-55046 NBU 921-30K4BS BHL Sec 30 T09S R21E 1877 FSL 2307 FWL Sec 30 T09S R21E 1984 FSL 2570 FWL 43-047-55048 NBU 921-30N1BS

BHL Sec 30 T09S R21E 1224 FSL 2307 FWL

RECEIVED: December 10, 2014

Page 2

API #	Ţ	WELL NAME			-	LOCAT	ION			
<b>PAD NBU 921-3</b> 43-047-55028		921-30J1BS BHL				R21E R21E				
43-047-55029	NBU	921-30G4CS BHL								
43-047-55031	NBU	921-30G1CS BHL				R21E R21E				
43-047-55032	NBU	921-30G1BS BHL								
43-047-55033	NBU	921-30B4CS BHL								
43-047-55038	NBU	921-30B4BS BHL	Sec Sec	30 30	T09S T09S	R21E R21E	2076 0898	FNL FNL	2108 1954	FEL FEL
43-047-55036	NBU	921-30C4CS BHL	Sec	30	T09S	R21E	1646	FNL	2547	FWL
43-047-55037	NBU	921-30C1CS BHL								
43-047-55039	NBU	921-30F1BS BHL								
43-047-55040	NBU	921-30F1CS BHL								
43-047-55041	NBU	921-30F4BS BHL								
		921-30F4CS BHL	Sec Sec	30 30	T09S T09S	R21E R21E	1659 2363	FNL FNL	2531 2308	FWL FWL
<b>PAD NBU 921-3</b> 43-047-55042		921-30M1BS BHL	Sec	30	T09S	R21E	0901	FSL	0189	FWL
43-047-55043	NBU	921-30M4BS BHL				R21E R21E				
		921-30M1CS BHL				R21E R21E				
<b>PAD NBU 921-3</b> 43-047-55049	-	921-30L4CS BHL				R21E R21E				
43-047-55061	NBU	921-30L4BS BHL				R21E R21E				
43-047-55064	NBU	921-30E4BS BHL				R21E R21E				
43-047-55065	NBU	921-30E4CS BHL				R21E R21E				
43-047-55066	NBU	921-30L1BS BHL				R21E R21E				
43-047-55067	NBU	921-30L1CS BHL				R21E R21E				

API # WELL NAME LOCATION PAD NBU 921-30P 43-047-55050 NBU 921-30P4CS Sec 30 T09S R21E 0922 FSL 0204 FEL BHL Sec 30 T09S R21E 0248 FSL 0543 FEL 43-047-55059 NBU 921-30P1BS Sec 30 T09S R21E 0938 FSL 0191 FEL BHL Sec 30 T09S R21E 1229 FSL 0530 FEL 43-047-55062 NBU 921-30P1CS Sec 30 T09S R21E 0930 FSL 0198 FEL BHL Sec 30 T09S R21E 0901 FSL 0530 FEL 43-047-55063 NBU 921-30P4BS Sec 30 T09S R21E 0914 FSL 0210 FEL BHL Sec 30 T09S R21E 0574 FSL 0530 FEL PAD NBU 921-30N 43-047-55051 NBU 921-30N1CS Sec 30 T09S R21E 0526 FSL 2639 FWL BHL Sec 30 T09S R21E 0898 FSL 2307 FWL 43-047-55053 NBU 921-30N4BS Sec 30 T09S R21E 0521 FSL 2620 FWL BHL Sec 30 T09S R21E 0572 FSL 2307 FWL 43-047-55057 NBU 921-30N4CS Sec 30 T09S R21E 0524 FSL 2629 FWL BHL Sec 30 T09S R21E 0267 FSL 2299 FWL PAD NBU 921-300 43-047-55052 NBU 921-3001BS Sec 30 T09S R21E 0652 FSL 1986 FEL BHL Sec 30 T09S R21E 1061 FSL 1952 FEL Sec 30 T09S R21E 0646 FSL 2015 FEL 43-047-55054 NBU 921-30J1CS BHL Sec 30 T09S R21E 2042 FSL 1953 FEL 43-047-55055 NBU 921-30J4BS Sec 30 T09S R21E 0648 FSL 2006 FEL BHL Sec 30 T09S R21E 1715 FSL 1952 FEL 43-047-55056 NBU 921-30J4CS Sec 30 T09S R21E 0650 FSL 1996 FEL BHL Sec 30 T09S R21E 1389 FSL 1952 FEL 43-047-55058 NBU 921-3001CS Sec 30 T09S R21E 0657 FSL 1967 FEL BHL Sec 30 T09S R21E 0735 FSL 1952 FEL Sec 30 T09S R21E 0655 FSL 1976 FEL 43-047-55060 NBU 921-3004BS BHL Sec 30 T09S R21E 0408 FSL 1952 FEL

This office has no objection to permitting the wells at this time.



bcc: File - Natural Buttes Unit

Division of Oil Gas and Mining

Central Files Agr. Sec. Chron Fluid Chron

MCoulthard:mc:12-10-14

Page 3

## **WORKSHEET** APPLICATION FOR PERMIT TO DRILL

**APD RECEIVED:** 11/24/2014 API NO. ASSIGNED: 43047550250000

WELL NAME: NBU 921-30H4BS

OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P. (N2995) PHONE NUMBER: 720 929-6828

**CONTACT:** Joel Malefyt

PROPOSED LOCATION: NESE 30 090S 210E **Permit Tech Review:** 

> **SURFACE: 1948 FSL 0716 FEL Engineering Review:**

> **BOTTOM: 2008 FNL 0537 FEL** Geology Review:

**COUNTY: UINTAH** 

**LATITUDE**: 40.00508 LONGITUDE: -109.58740 UTM SURF EASTINGS: 620572.00 NORTHINGS: 4429277.00

FIELD NAME: NATURAL BUTTES LEASE TYPE: 1 - Federal

PROPOSED PRODUCING FORMATION(S): WASATCH-MESA VERDE **LEASE NUMBER: UTU 0581** 

SURFACE OWNER: 1 - Federal **COALBED METHANE: NO** 

**RECEIVED AND/OR REVIEWED: LOCATION AND SITING:** 

✓ PLAT R649-2-3.

Unit: NATURAL BUTTES Bond: FEDERAL - WYB000291

**Potash** R649-3-2. General

Oil Shale 190-5

Oil Shale 190-3 R649-3-3. Exception

Oil Shale 190-13 **Drilling Unit** 

Board Cause No: Cause 173-14 Water Permit: 43-8496

Effective Date: 12/2/1999 **RDCC Review:** 

Siting: Suspends General Siting Fee Surface Agreement

✓ Intent to Commingle R649-3-11. Directional Drill

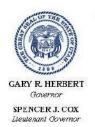
**Commingling Approved** 

Comments: Presite Completed

Stipulations:

3 - Commingling - ddoucet 4 - Federal Approval - dmason 15 - Directional - dmason 17 - Oil Shale 190-5(b) - dmason

RECEIVED: December 17, 2014



## State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

## Permit To Drill

\*\*\*\*\*

Well Name: NBU 921-30H4BS **API Well Number:** 43047550250000

Lease Number: UTU 0581 Surface Owner: FEDERAL Approval Date: 12/17/2014

#### Issued to:

KERR-MCGEE OIL & GAS ONSHORE, L.P., P.O. Box 173779, Denver, CO 80217

#### Authority:

Pursuant to Utah Code Ann. 40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 173-14. The expected producing formation or pool is the WASATCH-MESA VERDE Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

#### **Duration:**

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

#### **Commingle:**

In accordance with Board Cause No. 173-14, commingling of the production from the Wasatch formation and the Mesaverde formation in this well is allowed.

#### General:

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

## **Conditions of Approval:**

State approval of this well does not supercede the required federal approval, which must be obtained prior to drilling.

In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

In accordance with the Order in Cause No. 190-5(b) dated October 28, 1982, the operator shall comply with the requirements of Rules R649-3-31 and R649-3-27 pertaining to Designated Oil Shale Areas. Additionally, the operators shall ensure that the surface and or production casing is properly cemented over the entire oil

shale section as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the division.

## **Notification Requirements:**

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

• Within 24 hours following the spudding of the well - contact Carol Daniels at 801-538-5284

(please leave a voicemail message if not available)

submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website

at http://oilgas.ogm.utah.gov

## Reporting Requirements:

All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) due within 5 days of spudding the well
- Monthly Status Report (Form 9) due by 5th day of the following calendar month
  - Requests to Change Plans (Form 9) due prior to implementation
  - Written Notice of Emergency Changes (Form 9) due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) due prior to implementation
  - Report of Water Encountered (Form 7) due within 30 days after completion
- Well Completion Report (Form 8) due within 30 days after completion or plugging

Approved By:

For John Rogers Associate Director, Oil & Gas Form 3160-3 (August 2007)

# RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIORAUG 2 7 2014

FORM APPROVED OMB No. 1004-0136 Expires July 31, 2010

BUREAU OF LAND MANAGEMENT

Expires July 31, 20

5. Lease Serial No.

UTU0581

APPLICATION FOR PERMIT	PERMITTING TO BELLEVIE RELIEUR	6. If Indian, Allottee or Tribe Name
la. Type of Work: DRILL REENTER	RECEIVED	7. If Unit or CA Agreement, Name and No. UTU63047A
1b. Type of Well: 🗖 Oil Well 🚍 Gas Well 🔊 Qth	FEB 17 2015  er Single Zone Multiple Zone	8. Lease Name and Well No. NBU 921-30H4BS
Name of Operator     KERR-MCGEE OIL & GAS ONSHORE:  Onlact.   <u> </u>	9. API Well No.	
3a. Address P.O. BOX 173779 DENVER, CO 80202-3779	3b. Phone No. (include area code) Ph: 720-929-6828 Fx: 720-929-7828	10. Field and Pool, or Exploratory NATURAL BUTTES
4. Location of Well (Report location clearly and in accorda	nce with any State requirements.*)	11. Sec., T., R., M., or Blk. and Survey or Area
At surface NESE 1948FSL 716FEL 40	0.005081 N Lat, 109.587515 W Lon	Sec 30 T9S R21E Mer SLB
At proposed prod. zone SENE 2008FNL 537FEL 40	0.008741 N Lat, 109.586891 W Lon	
14. Distance in miles and direction from nearest town or post of 45.7 MILES SOUTH OF VERNAL, UT	office*	12. County or Parish UINTAH 13. State UT
<ol> <li>Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 2078</li> </ol>	16. No. of Acres in Lease 2400.00	17. Spacing Unit dedicated to this well
18. Distance from proposed location to nearest well, drilling,	19. Proposed Depth	20. BLM/BIA Bond No. on file
completed, applied for, on this lease, ft.	11459 MD 11243 TVD	WYB000291
21. Elevations (Show whether DF, KB, RT, GL, etc. 4891 GL	22. Approximate date work will start 01/01/2015	23. Estimated duration 60-90 DAYS
	24. Attachments	
The following, completed in accordance with the requirements o	f Onshore Oil and Gas Order No. 1, shall be attached to	this form:
Well plat certified by a registered surveyor.     A Drilling Plan.     A Surface Use Plan (if the location is on National Forest Syst SUPO shall be filed with the appropriate Forest Service Office.)	Item 20 above).  S Operator certification	formation and/or plans as may be required by the
25. Signature (Electronic Submission)	Name (Printed/Typed) JOEL MALEFYT Ph: 720-929-6828	Date 08/27/2014
Title REGULATORY ANALYST		
Approved by (Signature)	Name (Printed/Typed) Jerry Kencz	zka PEB 1 0 2015
Assistant Field Manager Lands & Mineral Resources	Office VERNAL FIELD OFFIC	E
Application approval does not warrant or certify the applicant hopperations thereon.	lds legal or equitable title to those rights in the subject le IONS OF APPROVAL ATTACHED	ease which would entitle the applicant to conduct
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, r States any false, fictitious or fraudulent statements or representat	nake it a crime for any person knowingly and willfully t	o make to any department or agency of the United

Additional Operator Remarks (see next page)

Electronic Submission #258665 verified by the BLM Well Information System For KERR-MCGEE OIL & GAS ONSHORE, sent to the Vernal committed to AFMSS for processing by ROBIN R. HANSEN on 09/04/2014 ()

MOTION CHAPPROVAL





## UNITED STATES DEPARTMENT OF THE INTERIOR **BUREAU OF LAND MANAGEMENT VERNAL FIELD OFFICE** 170 South 500 East

**VERNAL, UT 84078** 

(435) 781-4400



## CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL

Company:

Kerr-Mcgee Oil & Gas Onshore L.P.

Location:

NESE, Sec. 30, T9S, R21E

Well No: API No:

921-30H4BS 43-047-55025 Lease No: Agreement: UTU0581 UTU63047A

**OFFICE NUMBER:** 

(435) 781-4400

OFFICE FAX NUMBER:

(435) 781-3420

## A COPY OF THESE CONDITIONS SHALL BE FURNISHED TO YOUR FIELD REPRESENTATIVE TO INSURE COMPLIANCE

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (43 CFR Part 3160), and this approved Application for Permit to Drill including Surface and Downhole Conditions of Approval. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling, and completion operations. This permit is approved for a two (2) year period, or until lease expiration, whichever occurs first. An additional extension, up to two (2) years, may be applied for by sundry notice prior to expiration.

## NOTIFICATION REQUIREMENTS

Location Construction (Notify Environmental Scientist)	<ul> <li>Forty-Eight (48) hours prior to construction of location and access roads.</li> </ul>
Location Completion (Notify Environmental Scientist)	- Prior to moving on the drilling rig.
Spud Notice (Notify Petroleum Engineer)	- Twenty-Four (24) hours prior to spudding the well.
Casing String & Cementing (Notify Supv. Petroleum Tech.)	- Twenty-Four (24) hours prior to running casing and cementing all casing strings to:  blm_ut_vn_opreport@blm.gov
BOP & Related Equipment Tests (Notify Supv. Petroleum Tech.)	- Twenty-Four (24) hours prior to initiating pressure tests.
First Production Notice (Notify Petroleum Engineer)	- Within Five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days.

Page 2 of 7 Well: 921-30H4BS 1/21/2015

## SURFACE USE PROGRAM CONDITIONS OF APPROVAL (COAs)

- All new and replacement internal combustion gas field engines of less than or equal to 300 designrated horsepower must not emit more than 2 gms of NO<sub>x</sub> per horsepower-hour. This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower.
- All and replacement internal combustion gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 gms of NO<sub>x</sub> per horsepower-hour.
- If there is an active Gilsonite mining operation within 2 miles of the well location, operator shall notify the Gilsonite operator at least 48 hours prior to any blasting during construction?
- If paleontological materials are uncovered during construction, the operator is to immediately stop
  work and contact the Authorized Officer (AO). A determination will be made by the AO as to what
  mitigation may be necessary for the discovered paleontologic material before construction can
  continue.
- KMG would conduct apleontlogical survey onal ofits fedral ocations. All personnel will refain from colecting fosils and from disturbing any signficant fosil nthe GNBPA. An infiltration gallery will be constructed in a USFWS approved location. An infiltration galery isbasicaly apit ortench dug withn aflodplain toa depth below the water table. Water is drawn from the pit rather than from the river directly. If this not possible, KMG will submit pumping withnn the river tof-chanel ocations tha dont conect othe river during hig spring flows.
- If water canot bedrawn using the measures below, and the pump head will belocated in the river chanel wher larvl fish are known tocur, the folwing measures will apply (BLM 2012b):
- KMG wil avoid pumping from low-flow orno-flw areas thes habitas tend to concentrate larval fishes;
- KMG will avoid pumping to the greatest extension possible, during the period of the year when larval fish may be present (approximately April 1to August 31);
- KMG will avoid pumping, to the greatest extent possible, during the midnight ours (10:00 pm to 2:00 am) as larval drift studies indicate that is a period for the greatest daily activity. Dusk is the preferred pumping time as larval drift abundance is slowest.
- KMG will screen all pump intakes with 3/2-inch mesh material.
- If paleontological materials were to be uncovered during construction, KMG will immediately stop construction and contact the apropriate AO. A determination will be made by the AO as to what mitigation may be necessary for the discovered paleontological material before construction can continue.
- Damage to livestock and livestock facilities will be reported as quickly as possible to
  the BLM and affectd livestock operators. Operators will develop and employ prevention
  measures to avoid damage to fences, gates, and cattle guards, including upgrading cattle guard
  gate widths and load-bearing requirements and fencing all open pits and cellars.

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- If partil orcomplet removal of a ence anot be avoide, the fnce would be raced and tied ofper the BLM guidance. Wher the fnce is crosed by a road, the fnce would be braced and cattle guard and gate installed per BLM guidance.
- Speed limits will be followed and signs will be erected in lambing/calving areas, shipping pastures or adjacent or working corals to warn vehicle operators. (April 1to June 1)
- In accordance with e procedures described in the Pesticide/ Herbicide Use Plan, KMG will monitor for the growth of invasive weeds resulting from surface disturbance caused by project actives and will control weeds caused by Project activities.
- KMG would use its best efforts to control noxious weeds along access roads
  authorizations, pipeline route authorizations, well sites, or other proposed facilities by spraying
  or mechanical removal. A list of noxious weeds will be obtained from the BLM or the
  appropriate County Extension Office. On BLM administered land, a Pesticide Use Proposal
  will be submitted and approved prior to the application of herbicides other pesticides or
  Possibly hazardous chemicals.
- KMG would conduct pre-disturbance wed inventories toidentify locations ofnoxius and invasive wed species.
- A 1-or 2-year rest period or mechanical control would be required prior to reseeding on areas treated with herbicide spraying.
- An integrated wed mangemnt plan wil bedveloped, and include the following Components.
- Surveying for special status plant species before treating area, x Considering effects on special status specifics when designing herbicide treatment
- programs, using drift reduction agents reduce the risk of drift hazard, and
- Using selctive hrbicde and awick tobackpack sprayer tominmize risk tospecial Plants.
- Dirt ramps would be built and maintained at an angle not exceed 45degres every 150 to 20 fet along open pieline trenches toreduce habita fragmentaion ad increase Accessibly of small animals (mammals, reptiles, amphibians) to adjacent habitats.
- On level or gently sloping round (5percnt slope orles), surface pielines (4inches or greater in diameter) will be elevated a minimum of 6 inches above the ground to allow passage of small animal's beneath pipe. This ground clearance would be achieved by placing the pipeline on blocks at intervals of 150 or 20 feet or as appropriate.
- Bird Exclusion netting will be installed over reserve pits containing water that are left open for more than 30 days to reduce possibility of exposure to hazardous chemicals.
- KMG will nstal bird-excluding devices tha prevnt he prching and entry ofmigratory birds on or into are new fired vessel exhaust sacks.

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# DOWNHOLE PROGRAM CONDITIONS OF APPROVAL (COAs)

- Kerr-McGee Oil & Gas Onshore L.P. shall adhere to all referenced requirements in the SOP (version: "Standard Operating Practice Agreement for the Greater Natural Buttes Field",Oct 21, 2012). The operator shall also comply with applicable laws and regulations; with lease terms Onshore Oil and Gas Orders, NTL's; and with other orders and instructions of the, authorized officer.
- If Operators reaches TD in the Blackhawk formation a 10M BOPE system, or a 5M system with an additional pipe ram, shall be in place.

All provisions outlined in Onshore Oil & Gas Order #2 Drilling Operations shall be strictly adhered to. The following items are emphasized:

#### DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.
- All requirements listed in Onshore Order #2 III. E. Special Drilling Operations are applicable for air drilling of surface hole.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.
- All BOPE components shall be inspected daily and those inspections shall be recorded in the daily drilling report. Components shall be operated and tested as required by Onshore Oil & Gas Order No. 2 to insure good mechanical working order. All BOPE pressure tests shall be performed by a test pump with a chart recorder and <u>NOT</u> by the rig pumps. Test shall be reported in the driller's log.
- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.
- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.
- No aggressive/fresh hard-banded drill pipe shall be used within casing.
- Cement baskets shall not be run on surface casing.
- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water is encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM Vernal-Field Office.

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- The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.
- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.
- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM,
   Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.
- A cement bond log (CBL) will be run from the production casing shoe to the top of cement and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.
- Please submit an electronic copy of all other logs run on this well in CD (compact disc) format to the Vernal BLM Field Office. This submission will supersede the requirement for submittal of paper logs to the BLM.
- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

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#### **OPERATING REQUIREMENT REMINDERS:**

- All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.
- For information regarding production reporting, contact the Office of Natural Resources Revenue (ONRR) at www.ONRR.gov.
- Should the well be successfully completed for production, the BLM Vernal Field office must be
  notified when it is placed in a producing status. Such notification will be by written communication
  and must be received in this office by not later than the fifth business day following the date on
  which the well is placed on production. The notification shall provide, as a minimum, the following
  informational items:
  - Operator name, address, and telephone number.
  - o Well name and number.
  - Well location (¼¼, Sec., Twn, Rng, and P.M.).
  - Date well was placed in a producing status (date of first production for which royalty will be paid).
  - o The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).
  - o The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.
  - Unit agreement and/or participating area name and number, if applicable.
  - Communitization agreement number, if applicable.
- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from the BLM Vernal Field Office.
- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will be reported to the BLM, Vernal Field Office. Major events, as defined in NTL3A, shall be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will be reported in writing within 15 days. "Minor Events" will be reported on the Monthly Report of Operations and Production.
- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4. Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs, core data, drill stem test data, and results of production tests if performed. Samples (cuttings, fluid.

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and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.

- All off-lease storage, off-lease measurement, or commingling on-lease or off-lease, shall have prior written approval from the BLM Vernal Field Office.
- Oil and gas meters shall be calibrated in place prior to any deliveries. The BLM Vernal Field Office
  Petroleum Engineers will be provided with a date and time for the initial meter calibration and all
  future meter proving schedules. A copy of the meter calibration reports shall be submitted to the
  BLM Vernal Field Office. All measurement facilities will conform to the API standards for liquid
  hydrocarbons and the AGA standards for natural gas measurement. All measurement points shall
  be identified as the point of sale or allocation for royalty purposes.
- A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted to the BLM Vernal Field Office within 30 days of installation or first production, whichever occurs first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with Onshore Oil & Gas Order No. 3.
- Any additional construction, reconstruction, or alterations of facilities, including roads, gathering
  lines, batteries, etc., which will result in the disturbance of new ground, shall require the filing of a
  suitable plan and need prior approval of the BLM Vernal Field Office. Emergency approval may be
  obtained orally, but such approval does not waive the written report requirement.
- No location shall be constructed or moved, no well shall be plugged, and no drilling or workover
  equipment shall be removed from a well to be placed in a suspended status without prior approval
  of the BLM Vernal Field Office. If operations are to be suspended for more than 30 days, prior
  approval of the BLM Vernal Field Office shall be obtained and notification given before resumption
  of operations.
- Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method shall be submitted along with any necessary water analyses, as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90-day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by this office.
- Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office
  Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in
  order that a representative may witness plugging operations. If a well is suspended or abandoned,
  all pits must be fenced immediately until they are backfilled. The "Subsequent Report of
  Abandonment" (Form BLM 3160-5) must be submitted within 30 days after the actual plugging of
  the well bore, showing location of plugs, amount of cement in each, and amount of casing left in
  hole, and the current status of the surface restoration.

Sundry Number: 68133 API Well Number: 43047550250000

	STATE OF UTAH		FORM 9	
DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING			5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 0581	
SUNDRY NOTICES AND REPORTS ON WELLS			6. IF INDIAN, ALLOTTEE OR TRIBE NAME:	
	posals to drill new wells, significantly de reenter plugged wells, or to drill horizonta n for such proposals.		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES	
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 921-30H4BS	
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	ISHORE, L.P.		9. API NUMBER: 43047550250000	
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th	PF n Street, Suite 600, Denver, CO, 80217 3	HONE NUMBER: 779 720 929-6	9. FIELD and POOL or WILDCAT: 5NATURAL BUTTES	
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1948 FSL 0716 FEL			COUNTY: UINTAH	
QTR/QTR, SECTION, TOWNSH	<b>HP, RANGE, MERIDIAN:</b> 0 Township: 09.0S Range: 21.0E Meridian	: S	STATE: UTAH	
11. CHECI	K APPROPRIATE BOXES TO INDICATE	NATURE OF NOTICE, REPOF	T, OR OTHER DATA	
TYPE OF SUBMISSION		TYPE OF ACTION		
	ACIDIZE	ALTER CASING	CASING REPAIR	
Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME	
12/2/2015	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE	
SUBSEQUENT REPORT	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION	
Date of Work Completion:	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK	
	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION	
SPUD REPORT Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON	
	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL	
DRILLING REPORT	WATER SHUTOFF	SI TA STATUS EXTENSION	✓ APD EXTENSION	
Report Date:	WILDCAT WELL DETERMINATION	OTHER	OTHER:	
	WILDCAT WELL DETERMINATION	OTHER	OTILE.	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  Kerr-McGee Oil & Gas Onshore, L.P. (Kerr-McGee) respectfully requests an extension to this APD for the maximum time allowed. Please contact the undersigned with any questions and/or comments. Thank you.  Approved by the Debender Oil, Gas and Mining				
			Date:	
			By: Lacylll	
NAME (PLEASE PRINT)	PHONE NUMBER			
Jennifer Thomas	720 929-6808	Regulatory Specialist		
SIGNATURE N/A		<b>DATE</b> 12/2/2015		

Sundry Number: 68133 API Well Number: 43047550250000



## The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

**Electronic Permitting System - Sundry Notices** 

## Request for Permit Extension Validation Well Number 43047550250000

API: 43047550250000 Well Name: NBU 921-30H4BS

Location: 1948 FSL 0716 FEL QTR NESE SEC 30 TWNP 090S RNG 210E MER S

Company Permit Issued to: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Date Original Permit Issued: 12/17/2014

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

• If located on private land, has the Yes 📵 No	ownership changed, if so, has the surface agreement been updated?
Have any wells been drilled in the requirements for this location?	e vicinity of the proposed well which would affect the spacing or siting  Yes  No
Has there been any unit or other proposed well?	agreements put in place that could affect the permitting or operation of thi o
Have there been any changes to to proposed location?     Yes	the access route including ownership, or rightof- way, which could affect the No
• Has the approved source of water	r for drilling changed? 🔘 Yes 🌘 No
	inges to the surface location or access route which will require a change in the onsite evaluation? ( Yes ( No
• Is bonding still in place, which co	vers this proposed well? 🌘 Yes 🔘 No
nature: Jennifer Thomas	Date: 12/2/2015

Sig

Title: Regulatory Specialist Representing: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Sundry Number: 76103 API Well Number: 43047550250000

			FORM 9	
STATE OF UTAH  DEPARTMENT OF NATURAL RESOURCES				
DIVISION OF OIL, GAS, AND MINING			5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 0581	
SUNDRY NOTICES AND REPORTS ON WELLS			6. IF INDIAN, ALLOTTEE OR TRIBE NAME:	
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.			7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES	
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 921-30H4BS	
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	NSHORE, L.P.		9. API NUMBER: 43047550250000	
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18tl	h Street, Suite 600, Denver, CO, 80217	<b>PHONE NUMBER:</b> 3779 720 929-0	9. FIELD and POOL or WILDCAT: 458ATURAL BUTTES	
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1948 FSL 0716 FEL			COUNTY: UINTAH	
QTR/QTR, SECTION, TOWNSH	HIP, RANGE, MERIDIAN: 0 Township: 09.0S Range: 21.0E Meridia	n: S	STATE: UTAH	
11. CHEC	K APPROPRIATE BOXES TO INDICATE	NATURE OF NOTICE, REPOR	RT, OR OTHER DATA	
TYPE OF SUBMISSION		TYPE OF ACTION		
	ACIDIZE [	ALTER CASING	CASING REPAIR	
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME	
11/4/2016	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE	
SUBSEQUENT REPORT	DEEDEN [	FRACTURE TREAT	NEW CONSTRUCTION	
Date of Work Completion:				
	OPERATOR CHANGE	PLUG AND ABANDON	☐ PLUG BACK	
SPUD REPORT	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION	
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	L TEMPORARY ABANDON	
	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL	
DRILLING REPORT Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	✓ APD EXTENSION	
	WILDCAT WELL DETERMINATION	OTHER	OTHER:	
Kerr-McGee Oil & G an extension to this	COMPLETED OPERATIONS. Clearly show all cas Onshore, L.P. (Kerr-McGe APD for the maximum time a with any questions and/or col	e) respectfully requests llowed. Please contact	Approved by the	
NAME (PLEASE PRINT) Candice Barber	PHONE NUMBE 435 781-9749	R TITLE HSE Representative		
SIGNATURE	430 101-8148 ———————————————————————————————————	DATE		
N/A		11/4/2016		

Sundry Number: 76103 API Well Number: 43047550250000



## The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

**Electronic Permitting System - Sundry Notices** 

## Request for Permit Extension Validation Well Number 43047550250000

API: 43047550250000 Well Name: NBU 921-30H4BS

Location: 1948 FSL 0716 FEL QTR NESE SEC 30 TWNP 090S RNG 210E MER S

Company Permit Issued to: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Date Original Permit Issued: 12/17/2014

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

• If located on private land, has the ownership changed, if so, has the surface agreement been updated?  Yes  No
<ul> <li>Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location?</li> <li>Yes</li> <li>No</li> </ul>
• Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? Yes No
• Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location?  Yes  No
• Has the approved source of water for drilling changed?   Yes  No
<ul> <li>Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation?</li> <li>Yes</li> <li>No</li> </ul>
• Is bonding still in place, which covers this proposed well?   Yes   No
nature: Candice Barber Date: 11/4/2016

Sig

Title: HSE Representative Representing: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Sundry Number: 76042 API Well Number: 43047550250000

			1	
	STATE OF UTAH		FORM 9	
DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING			5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 0581	
SUNDF	RY NOTICES AND REPORTS O	N WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:	
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.			7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES	
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 921-30H4BS	
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	NSHORE, L.P.		9. API NUMBER: 43047550250000	
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18t	h Street, Suite 600, Denver, CO, 80217	<b>PHONE NUMBER:</b> 3779 720 929-6	9. FIELD and POOL or WILDCAT: 458ATURAL BUTTES	
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1948 FSL 0716 FEL			COUNTY: UINTAH	
QTR/QTR, SECTION, TOWNS	<mark>HIP, RANGE, MERIDIAN:</mark> 80 Township: 09.0S Range: 21.0E Meridia	n: S	STATE: UTAH	
11. CHEC	K APPROPRIATE BOXES TO INDICATE	NATURE OF NOTICE, REPOR	RT, OR OTHER DATA	
TYPE OF SUBMISSION		TYPE OF ACTION		
	ACIDIZE	ALTER CASING	CASING REPAIR	
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME	
11/3/2016	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE	
SUBSEQUENT REPORT	DEEPEN [	FRACTURE TREAT	☐ NEW CONSTRUCTION	
Date of Work Completion:	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK	
	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION	
SPUD REPORT Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON	
	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL	
DRILLING REPORT	WATER SHUTOFF	SI TA STATUS EXTENSION	✓ APD EXTENSION	
Report Date:	WILDCAT WELL DETERMINATION	OTHER	OTHER:	
42 DESCRIPE PROPOSED OF			<u>'</u>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  Kerr-McGee Oil & Gas Onshore, L.P. (Kerr-McGee) respectfully requests an extension to this APD for the maximum time allowed. Please contact the undersigned with any questions and/or comments. Thank you.  Approved by the Utland Dinbier of 08 of 2016 Oil, Gas and Mining				
			Date:	
			By: Daggill	
NAME (PLEASE PRINT) Joel Malefyt	PHONE NUMBE 720 929-6828	R TITLE Regualtory Analyst		
SIGNATURE	. 20 020 0020	DATE		
N/A		11/3/2016		

Sundry Number: 76042 API Well Number: 43047550250000



## The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

**Electronic Permitting System - Sundry Notices** 

## Request for Permit Extension Validation Well Number 43047550250000

**API:** 43047550250000 **Well Name:** NBU 921-30H4BS

Location: 1948 FSL 0716 FEL QTR NESE SEC 30 TWNP 090S RNG 210E MER S

Company Permit Issued to: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Date Original Permit Issued: 12/17/2014

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

•					
• If located Yes 📵	=	the ownership changed, if so	o, has the surface a	igreement been upda	ted?
	wells been drilled in tents for this location?	the vicinity of the proposed	well which would	affect the spacing or	siting
	e been any unit or othe d well? 🤵 Yes 🌘	er agreements put in place No	that could affect th	e permitting or opera	tion of this
	re been any changes to d location? 🔵 Yes(	o the access route includin No	g ownership, or rig	htof- way, which coul	d affect the
• Has the a	approved source of wa	ter for drilling changed?	Yes 📵 No		
		hanges to the surface locat I at the onsite evaluation?		which will require a	change in
• Is bondir	ng still in place, which	covers this proposed well?	Yes No		
Signature: Joe	el Malefyt	Date: 11/3/2016			

Title: Regualtory Analyst Representing: KERR-MCGEE OIL & GAS ONSHORE, L.P.